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model **car** *Science*



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FEBRUARY 1985

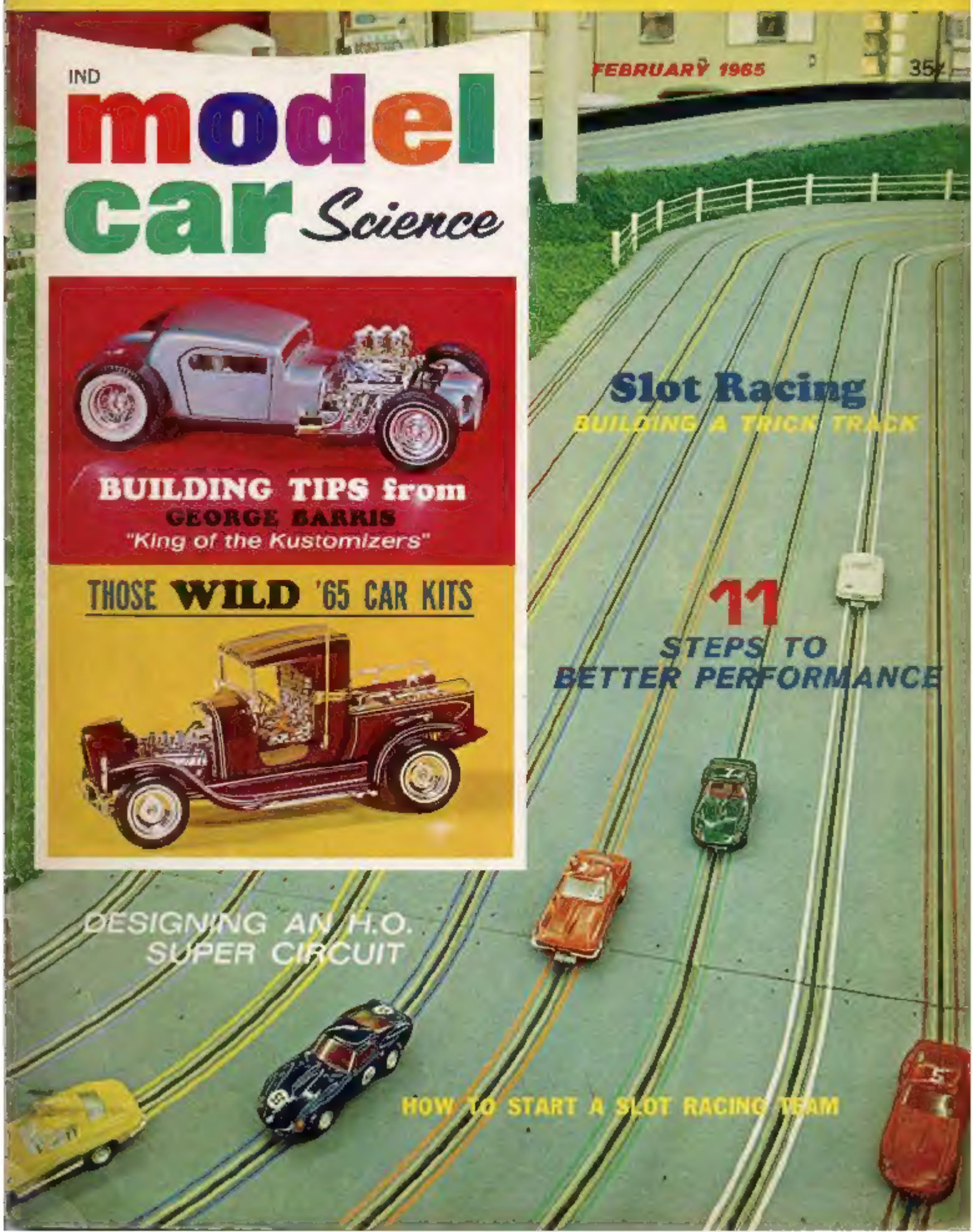
35

Slot Racing

BUILDING A TRICK TRACK

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**STEPS TO
BETTER PERFORMANCE**

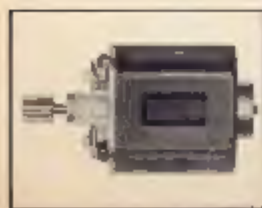


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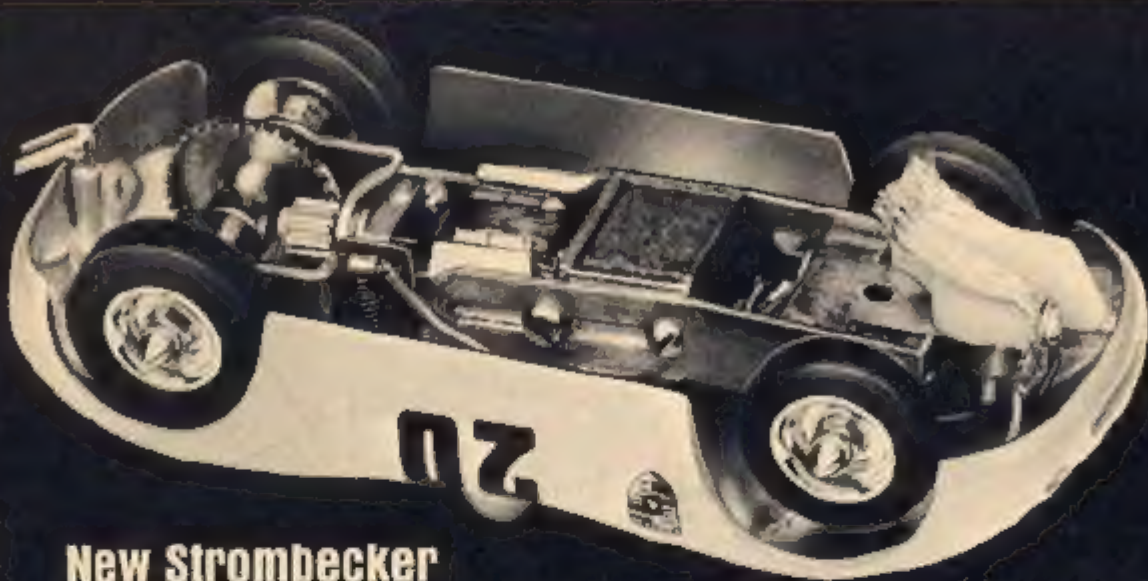


SPECS THE MOTOR: excellent horse-power-to-weight ratio, over 20,000 rpm at 12 volts. **THE BODY:** high impact, injection molded plastic, one piece construction with fantastic detailing absolutely impossible in vacuum molded clear plastic shells. **THE CHASSIS AND RUNNING GEAR:** lightweight aluminum chassis, precision-turned aluminum wheels, Oilite sin-

tered bronze bearings, two sizes steel center drive gears, detailed real rubber professional racing tires, sponge slicks on the rear, hardened steel threaded metal axles, lightweight low-friction pickup blade, adjustable sturdy motor mounts, machined brass jam nuts, and the whole kit is only \$7. You can't beat that. And you can't be beat.

Send for your booklet on "Model Car Racing Tune-Up Tips." Please enclose 10¢ in coin (to cover postage and handling) to Department MC-4, REVELL, INC., 1823 Glencoe Ave., Venice, Calif.

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Designed and built to challenge the model racing world for engineering superiority, speed and performance, the new Strombecker competition chassis includes the red hot new Scuttler motor, lightweight brass frame and 180° nylon adjustable swivel pickup. Will fit all 1/24 and 1/32 scale models. Available in kit form (#8382, retail \$3.98) and as standard equipment in new competition kits.



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Porsche 95-61



Lotus MK-XIX



Ferrari GTD Berlinetta

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George Elliott
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Bob Hoepfner
Raymond E. Hoy
Bob Paeth

George Siposs
EDITORIAL CONTRIBUTORS

James M. Gray
C. Richard Gray
ART DIRECTORS

Tom Marinello
ART ASSOCIATE

Chan Bush
PHOTOGRAPHY

Jim Miller
EDITORIAL DIRECTOR

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Don Werner
Gordon Behn
PUBLISHERS

Edwin Gray
BUSINESS MANAGER

D. L. Ruth
PRODUCTION DIRECTOR

model car *Science*

Volume 3, Number 2

February, 1965

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COVER — Extraordinary craftsmanship displayed in the two custom models is but a small sampling of the great cars from around the nation shown in the Modeling Motorcade section this month. For the "Hot Doggers," the colorful slot track is the Tom Thumb race course in Panorama City, California. The track side scenery here is designed to provide the ultimate in realism for added racing enjoyment. This Ektachrome transparency was shot by MCS photographer Jim Farrell.

more of the WINNINGEST!

Racing's Big Four in Exciting New Slot Racer Kits by Monogram

FERRARI 250 GTO/LM

First model of this GTO with new Le Mans body. Entirely new squatty and "tougher" look with bobbed and recessed airfoil roof top. Realistic model of the car that was first in Daytona Continental. Ferrari red body. Tiger X-100 motor. 1/32 scale. Kit SR3205. \$5.98



FERRARI 275P

First at Sebring and LeMans in '64. Authentic model with Ferrari red body, larger more powerful Tiger X-200 hi-speed motor and extra-sturdy brass frame. 1/24 scale. Kit SR2408. \$6.98



COOPER-FORD

Rear-engined sensation that swept two of U.S. richest racing events. Faithful model with plated engine parts showing through rear deck. Rich blue body. Tiger X-100 motor. 1/32 scale. Kit SR3204. \$5.98



PORSCHE 904

First in class at Daytona and Sebring. Overall first and second at Targa Florio. Beautiful sleek model with light blue body. Tiger X-100 motor. 1/32 scale. Kit SR3203. \$5.98

Enjoy slot racing at its wonderful best. Here are 1964's big sensations — right from the road and track into your own racing fun and enjoyment. Like all Monogram racing models, the Big Four have all the speed you can use and performance and handling to make you happy, plus the last touch of realism.

Check the features of these new and complete kits. Hi-impact one piece upper body—Tiger X-100 and X-200 high-speed racing motor—clear windscreen, windows and headlight covers—Tiger Traction racing tires—light weight sturdy brass frame—precision aluminum wheels with plated insert hubs—precision steel gears—steel

axles with machined treads — nylon pickup — racing mirror — racing driver and extra skull head — bronze bearings—authentic racing decals. Assembly is easy—no painting or finishing required.

See these new racers and other fine Monogram racer models at your favorite store.

Slot Racing Parts and Accessories

"The heart of the racer." The fine precision parts used in Monogram Racer Kits are also available separately in both 1/32 and 1/24 scale. 28 different items and assortments—from screws and nuts to motors and chassis. Ask for Monogram Tiger Accessories.

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*** MODEL *** MAIL ***

GEAR CHANGE

I have a Revell 1/25th scale Lotus-Ford and I want to change the pinion gear. I tried to get it off but it doesn't come free, could you tell me how to remove it? Would a Pittman DC-196 fit my Lotus-Ford chassis?

Dan Woodward
Castro Valley, Calif.

The pinion gear on your motor is press fitted on the shaft and is somewhat hard to remove without damaging the shaft unless you have the proper tools. The item you need is a gear puller and there is now one on the market produced by International Engineering of Redondo Beach, California. Your hobby store should have them.

Yes, the Pittman DC-196 will fit your Lotus chassis with room to spare.

KITS AND TAPE

I would like to know where I could get the Monogram and Strombecker racing kits for the prices you quoted in your November issue of M.C.S. on pages 11 and 13. I would also like to get them from a mail order firm if possible.

I also need to know which kind of tape would be better for a home-made race track: aluminum, copper, or lead.

Harley Ford
Sand Springs, Okla.

The prices quoted are the normal retail price available to you at any store that carries racing equipment. Most all of the large mail order houses that have ads in our magazine carry these items. Check your current issues for their addresses.

A copper base braid is the best pickup tape to use, it will take a lot more hard use than the ribbon types. A new product just out by Cox takes most of the hard work out of installing this type. It has an adhesive backing and only requires a hot iron to apply.

THROTTLE LINKAGE

Could you tell me how to fit the accelerator pedal in A.M.T.'s '57 T-Bird and run it to the Hilborn injectors in Revell's Ford 427 engine kit?

Mike Niarchor
Canton, Ohio

Most all injected set-ups use either a flex cable in a tube set up or a hydraulic master and slave cylinder unit. The first uses a push pull cable contained within a tube. The hydraulic unit has the master cylinder at the foot throttle with a small hose running to the slave cylinder at the throttle arm. Whichever one you wish to duplicate would only require a medi-

um size thread or wire running from the foot throttle to the butterfly operating link on the injector.

THE CRAFTSMAN'S GUILD CONTEST

Would you please send me the details of the Fisher Body contest. I would like to enter it but do not have the address to write for details.

Reid Matinson
Cedar Rapids, Iowa

This is the most rewarding contest that any model car builder could ever enter, and we heartily recommend it to any of you who will take the time required to turn out a first rate entry.

Write to the Fisher Body Craftsman's Guild, Dept. B-1, Warren, Michigan, for enrollment, and ask them to send their instruction booklet "Designing and Building a Model Car." With your entry you will receive regular editions of the Craftsman's newspaper. It contains a number of valuable tips and ideas that will help you in building your model.

In this contest you are allowed complete freedom to design any type model that you can think up. It does not have to be a customized conventional type, but can be what you think the car of tomorrow might be to use your originality and design something that's way out. There are rules and specifications and overall dimensions that your entry must comply with. All models must be built to a one-twelfth scale, just about double the size that most of us are accustomed to. This scale will allow the addition of all those small but point getting details that are so necessary in the final judging. So get your entries in; it's not too early as a prize winning model will take a lot of time to design and construct.

MONOGRAM SLOT CARS

In your October '64 issue you have an article: "Monogram Moves Into Motoring," on page 42. Will these cars run on most tracks?

Brian Peet
Saskatoon, Sask., Canada

All of the Monogram cars have what is now considered as standard pick up dimensions and will run on all of the large commercial tracks as well as most of the kit tracks such as Strombecker, Revell and Scaletric. They will also work on tracks you may build out of material built by Kal-Kar, Roll-On-Roadways and Tru-Flex.

In all of these the pick up material metal, braid, or tape must be approx-

continued on page 8
MODEL CAR SCIENCE

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mately 1/16th from the edge of the slot and about 3/16ths inch wide. Most all manufacturers of 1/32nd and 1/24th scale cars and parts now use pick ups that will fit these basic dimensions.

DRILLS: WHAT DO THE NUMBERS MEAN?

I have been in the market for a drill set and have been confused by the markings #1 - #81. Could you please explain what these markings mean?

Carl Dreher
Gary, Indiana

There are three common categories that manufacturers of twist drills make. They are letter, number and fraction drills. To have a complete range of sizes under a half inch would require having all three sets.

Number drills come in two sets #1 to #60 and the very small ones in a separate set #61 to #80. The number one drill is a decimal dimension just under 3/4 inch, each number is a few thousands smaller, down to the number 50 drill which is just about 1/32 inch. The sizes of these drills fall a few thousands above or below the fractional sizes. An example would be a 1/8th inch hole, this is a fractional drill size and has a decimal equivalent of .125 but no number drill fits this dimension. The closest one is a number 30 drill which is .128, and the number 31 drill will be a few thousands smaller than the fractional drill size of 1/8th inch. The letter drills are to decimal dimensions and fall between the fractional drills in size between 1/4 inch and 1/2 inch.

The number drills will supply most of the needs of model building with an occasional fractional one to fill in the common sizes.

TRYING A TWISTER

I have been racing slot cars for about a year now and I'm trying to build the fastest and most interesting dragster possible. The model of the "Twister" was what first caught me, and upon reading the story on how the dragster could be made, I decided to see what I could do

to get one. You neglected to mention any particular dealer or place where one could find the body, so I am asking you would you please send me some ideas of either a manufacturer or a dealer to whom I could go to or write to?

Tod McKelvy
Atherton, California

Only one model of the Twister was built that we know about. It was made by the author of the article to illustrate how you could duplicate one for yourself. To the best of our knowledge that is the only way in which you may obtain one unless some one that we do not know about has decided to manufacture them.

A SWINGING PICKUP

Is there a chassis for a Pittman DC-65 motor that would fit in the Revell Sing-ray? It must also have a floating swing pickup arm.

John Porter
Hot Springs, Ark.

There are a number of chassis that will fit the Pittman DC-65, for both in-line and sidwinder mounting. Many are adjustable in wheelbase. The catch is in your requirement of a swing pickup as little has been done commercially in this area as yet; most floating pickups are scratch built to fit a particular installation. Why not try the Unique "Lite-Ning" chassis with a Dynamic swing pickup arm? The DC-65 will fit this combination like a glove.

SHEET STOCK

I would like to know where you can get sheet plastic for use in customizing the thickness that is used in regular model cars. I am building a low truck that was in one of your issues and was wondering if you might be able to give me further information.

Gary Otten
Toledo, Ohio

The Kentron Corporation has a good selection of sheet styrene in various thicknesses. If your hobby shop does not carry it, he should be able to order it for you from his supplier.

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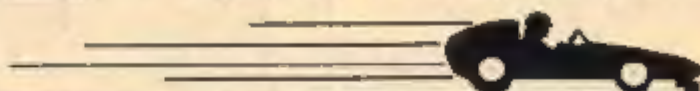
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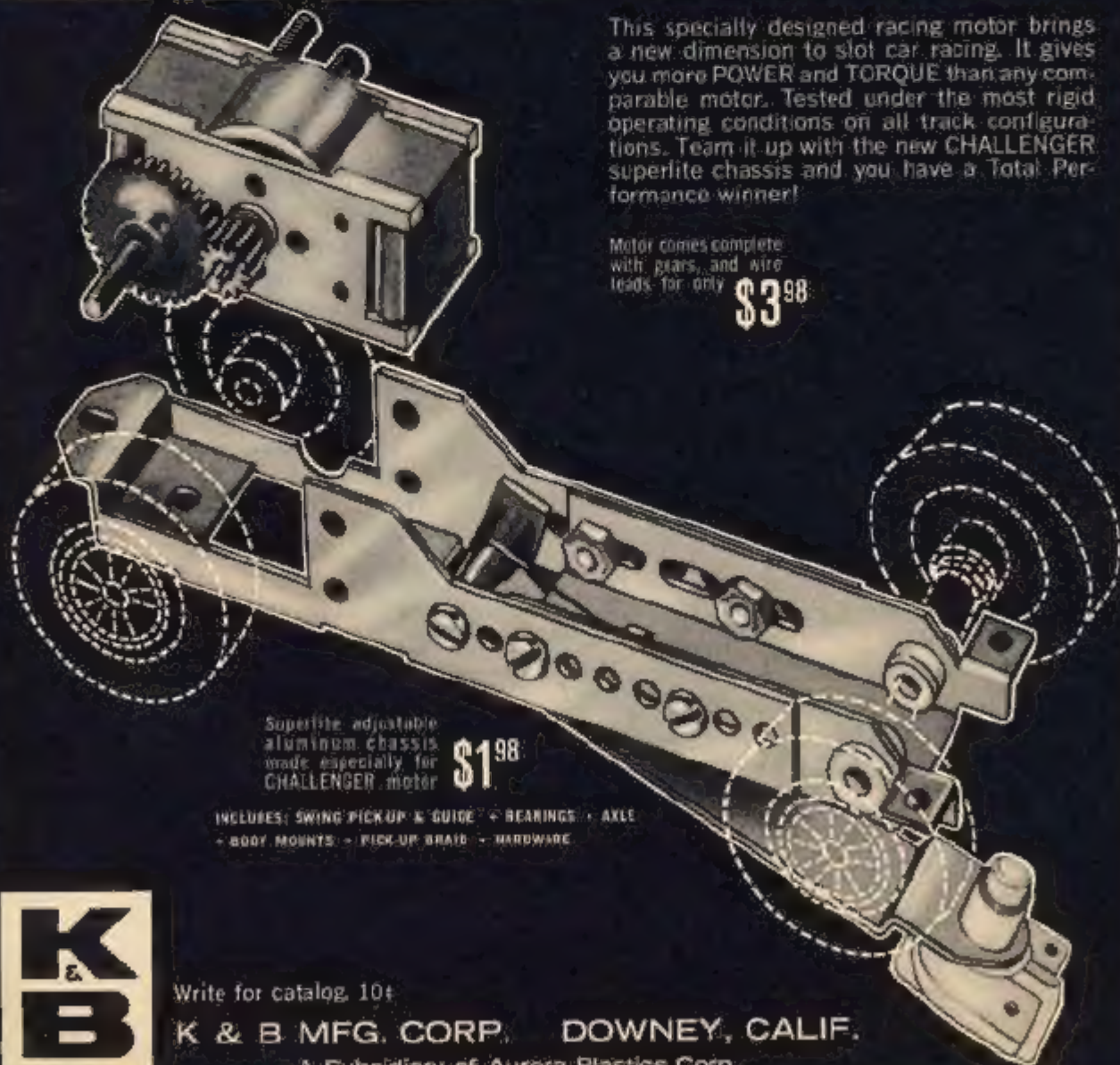
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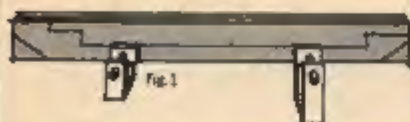
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x-acto tips for modelers

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Start with 1/4" magnesium stock, the length of both side rails. Cut the stock in half with your X-acto razor saw. Notice the clean separation. That's because X-acto's razor saw doesn't grab, it slices right through.

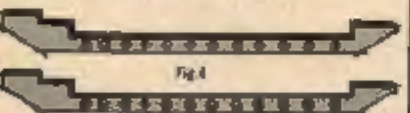
From a template, trace the outline of the side rail onto one half of the stock. Clamp both pieces together. Tightly. (Fig. 1) This is important, since from this step on both side rails will be worked simultaneously. That's why you want to be sure to use X-acto clamps, that never slip or slide.



Next, use your X-acto drill for the holes along each rail, following your tracing. (Fig. 2) Again, see how smooth the work is. X-acto carbon twist drill bits cut quickly and easily.



Ready for the final step. With the X-acto razor saw, cut out both side rails at the same time. (Fig. 3) Never any chipping or burred edges from X-acto blades. Remove the clamps and there you are, matching side rails in half the time. (Fig. 4)



To finish, consult your local hobby shop for details on motor, wheels, slicks, and design of the swing pick-up.

And while you're there, look over X-acto's complete line of fine tools.

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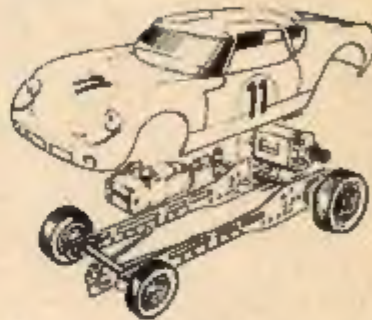
NEW TO SCALE



A high carbon steel retractable blade knife for cutting wood, plastic, paper, cardboard, cloth, soft metals, etc., has been developed by C&O Ltd. This knife was designed so that as the tip becomes dull, it may easily be broken off, and you'll have the equivalent of a new blade. This exclusive feature brings the cost per blade down to 1.6¢ each. The knife with two extra blades (12 sections per blade) in a plastic case retails for \$2.98. Ten additional blades in a plastic dispenser with a used blade compartment and break-off slot retail for \$1.95. Knives may be purchased at local hobby and craft stores, or from C&O Ltd., Dept. MCS-28, Box 74431, Los Angeles, Calif., 90004.



Tweezers for modelers made out of plastic? Yes, that's exactly what Willi A. Hagenlocher now offers. Made of glass-filled plastic, these unique tweezers are non-corrosive and resist such chemicals as acetone and alcohol. The 400 type has flat tips while the 500 is pointed. Priced at one dollar each, the tweezers are available from Willi A. Hagenlocher, Dept. MCS, 8003 Pumpkin Ct., Cupertino, Calif., 95014.

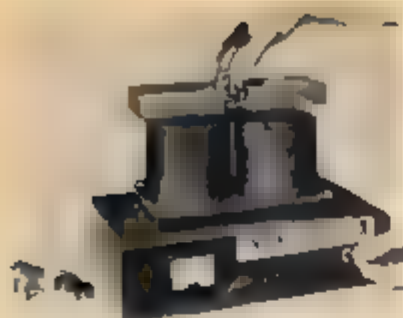


Just released by Model Die Casting, a brand new 1/24 scale side-winder kit featuring a magnesium or brass chassis. The kit will come complete with chassis, front and rear axle adjustments, precision bearings, Mabuchi motor, wheels and Model Die Casting tires, less body. The magnesium frames are designed to give maximum rigidity and yet save about one-third the weight of conventional metals. The kit was introduced as a Side-Winder assembly, however, may be run as an in-line as well. This versatile design takes just about any motor, K & S, Kemtron, Mabuchi 130, Mabuchi 170, Pittman, Revell, Ruskit, Tyco, Wilson and others. The entire package sells for \$7.98. For catalog sheet, write to M.D.C. Inc., Dept. MCS, P.O. Box 926, Hawthorne, Calif. 90252.



Several informative booklets are available absolutely free from L. M. Cox Mfg. Co., Inc., Dept. MCS, Box 476, Santa Ana, Calif., 92707. The newest publication from the firm tells all about outdoor slot racing with the Cox 1/20 scale, gas-powered Sting Ray and Riviera. One that will be valuable for those who own a gas model airplane or car engine is "How to Get the Best Performance Out of Your Model Engine." And, finally, there's the new 1964 catalog of Cox products. Order one or all three today.

MODEL CAR SCIENCE



A new magnetizer, Model 30-SR for slot racers, has been developed by Indiana General Corp. This unit will re-magnetize the motor magnet in seconds to a condition as good as new, or in some cases even better. Designed for slot tracks, hobby shops and club use, it is priced at \$195 and is available nationally through Henry L. Dubs Associates, Dept. MCS, 766 North Hillis Ave., North Hills, Pennsylvania. Inquiries for additional information should be directed to the Dubs organization.



Two totally new K&B components are now ready for scale trail buffs. The Challenger sidewinder motor and the superlight adjustable \$1.98 aluminum slot racing chassis designed specifically for this motor.

Tested under the most rigid operating conditions, on all track configurations, and claimed to have more power and torque than any comparable motor, the Challenger is all American made. Priced at only \$3.98, this sidewinder comes complete with gears, axle and wire leads.

Four screws is all it takes to mount the Challenger to K&B's new #309 adjustable chassis which has nylon bearings and a spring-action swing pick-up to insure electrical contact at all times. For more information, contact K&B Mfg. Corp., 12152 S. Woodruff Ave., Downey, Calif.

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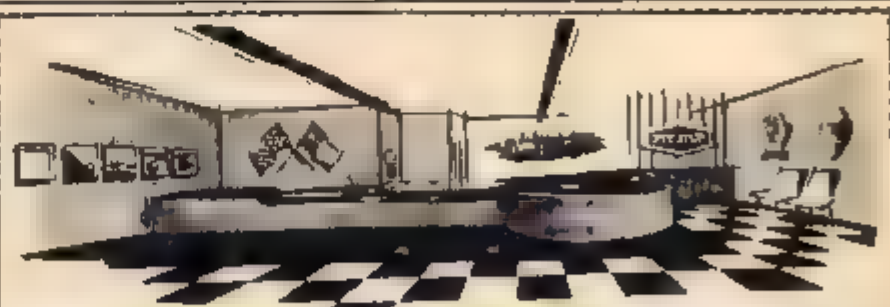
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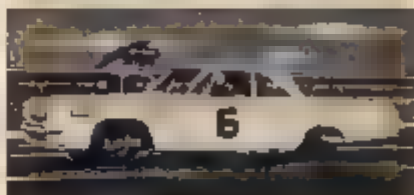
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Got a quarter? Get a set of five full-color pix of those '65 Wide-Track Tigers in action. The Pontiac GTO and 2+2. They're big (26 x 11½"), beautiful and ready for framing like the one above. You also get a full set of specs and tune-up tips. Just send 25¢ for handling and mailing to Wide-Track Tigers, P.O. Box 888G, 196 Wide-Track Blvd., Pontiac, Michigan.

There's a 2+2 hardtop banking the track at high speed . . . a GTO convertible shot from a "chopper" pacing overhead . . . a 2+2 convert running flat out on the straightaway . . . a GTO coupe goin' through the gears, and a GTO hardtop screaming down the strip all by itself. As usual!

You can frame these Wide-Track Tiger pix, hang them in the rec room, club room, bedroom, or anywhere the right people can see them. If you like going machinery, get a set of Wide-Track Tiger trophies. Got a loose quarter? They're yours.



Now available at your hobby store, the first '65 Customizing kits from Jo-Han Models include: a '65 Chrysler "300" hardtop with a new revolving custom grille, Indy 500 wheels, Fire-Power 360 engine and components for a rally version; a 1965 Dodge hardtop with a new 426 cubic inch Hemi-Charger engine that can be built in both the drag and circuit racing version, custom or stock. Last but far from least is a '65 American 440 hardtop featuring such detailed items as an operating trunk lid, spare tire, bumper jack and luggage. Also included is a full custom interior with contour bucket seats.

WILD '65's FROM AMT!

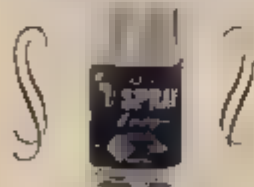


'65 IMPERIAL, with optional accessories to make wild wild pickup & padded, textured pickup top & engraved aluminum, seat rails & many, many more



'65 CONTINENTAL, with customizing options to make wild wagon & front and rear seat photos & optional woodgrain paneling & a host of custom options

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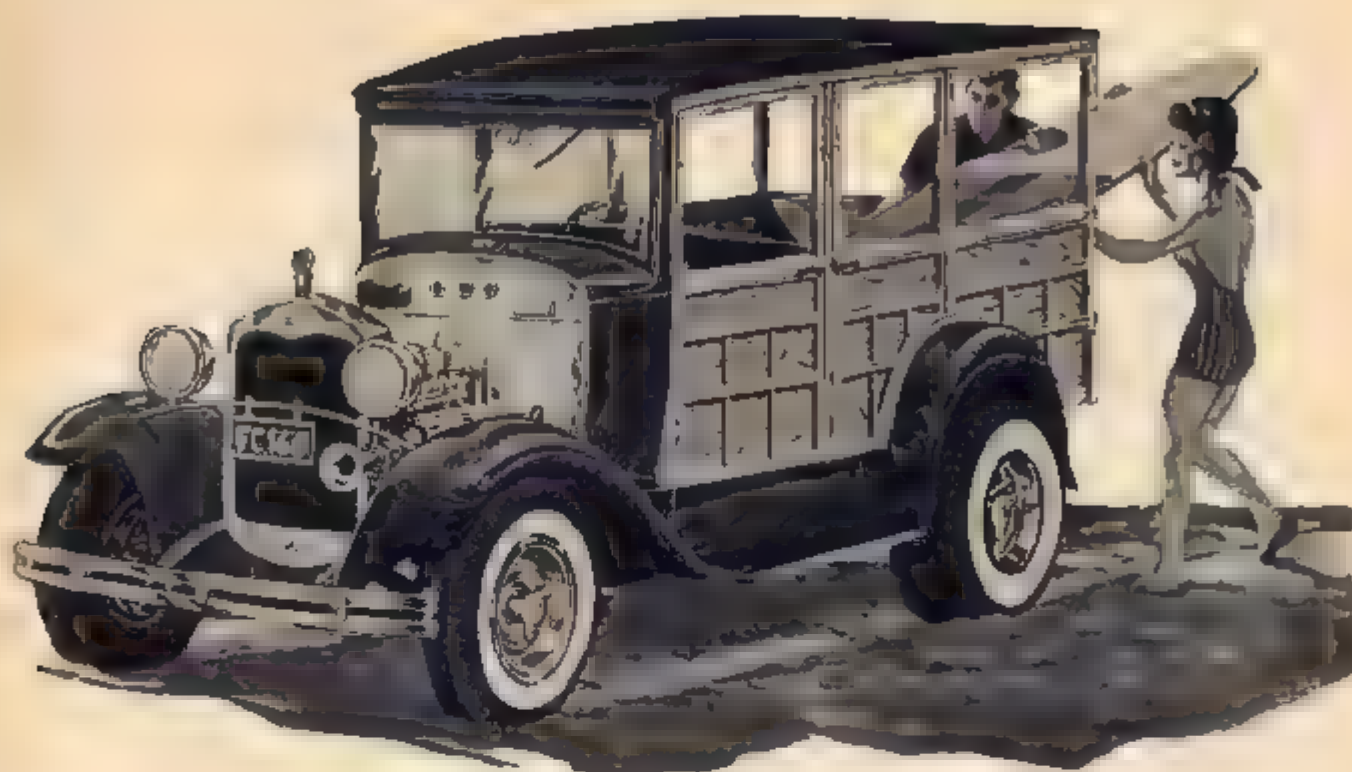
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IT'S A WILD, WILD, WILD WORLD FROM AMT!

WOODY WAGON



No Sissy — this Wagon! See the Big Chevy Engine — Husky Mag Wheels — Knock-Off Caps — White Wall Drag Slicks

Add this Monogram wagon to your car collection. It's a standout in any company. Yeah! Scaled from the 1930 Ford, a favorite of west coast surfers and prized by restorers. The wood-grained panels and operating tailgate have the look of the original maple woodwork. All detail is superb.

Everything is in this kit — complete body in red and natural wood color plastic — Chevy 283 cu. in.

engine with lots of gleaming chrome and six jugs — Mag wheels with knock-off caps — tires and slicks with white wall inserts and two scaled surfboards for your cargo space and extra flair. No painting required. 86 parts — 39 chrome finished. 1/24 scale. Kit PC103. Only \$ 49.

Get a Woody Wagon kit right now and enjoy a new angle in car modeling. Wherever hobby kits are sold.



PREDICTA Darryl Starbird's award winning futuristic Thunderbird. With bubble top and joystick lever steering. Has bucket seats and TV. Kit PC95. \$1.49



LIT'L COFFIN Scaled from full size World's Fair Show Car. Operating doors. Steerable wheels. De Soto engine and six carbs. Kit PC94. \$1.49

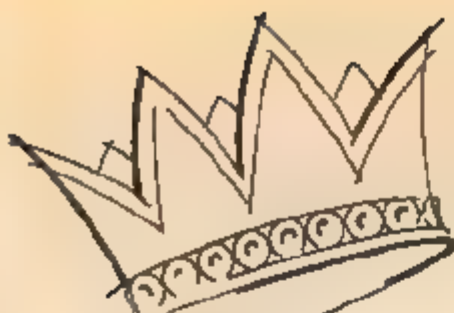


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Like the Unusual? Try These! Same 1/24 Scale



BARRIS KUSTOM KORNER



I HAVE MUCH NEWS for you all from my last trip, so sit back and relax while I delve into my memoirs.

As some of you already know, I travel most of the auto shows featuring the Ford Custom Caravan as Ford's advisor and also to bring you all of the latest and greatest in both big car and model car news.

Now, on to our latest show report. Our show director, Ken Scruffi, arrived in New York with the Munster Koach just moments before the big nationally televised Macy's Thanksgiving Day parade. Kea hurriedly rushed over to the area where he was to have been and all the parade officials were anxiously waiting. When they saw the Koach, there was more confusion and chaos over this weird, unusual, unique, ghostly and yet beautiful "T" roadster... and all of this happened, yes, right in front of the Waldorf Astoria Hotel. Can you just imagine those "Old Timers"? Man, I bet their hair was standing on end, especially when they saw actor Fred Gwyn and Al Lewis as Herman and Grandpa Munster fully attired in their Munster costumes with all of the ghostly make-up on — what a gas!

I personally had the pleasure of driving the "Munster Koach" in the parade with the now famous Munsters peering through its gold lamé, fringed-covered antique windows. I had a blast watching the people gasp and shriek and then laugh at the sight of the Munsters and their Koach. Then we headed back to the Waldorf, where the doorman almost passed out when he opened the door of the Koach and the Munsters stepped out. Too much!

Of course, we had a couple of small accidents — Mr. Dave Garraway's float was behind us and the driver was so entranced with our koach he smacked into our rear, and later while driving in the streets of New York, an entranced woman hit us on the right front side. We then shuffled off to White Plains, New York to another successful 2 1/2 hour parade and then two days of solid inter-

viewing and appearances in Detroit at Ford Motor Co., A.M.T., CBS-TV, hobby stores and some schools. We then finished in Chicago with a CBS-TV interview and a six hour appearance at the Sears & Roebuck store. Now the Munster Koach is en route home and ready for the cameras to do an early Monday morning TV movie.

Now for the New York show, produced by The Show Promotions, Inc. The show had some of the "way-outest" wildest rods and customs that I've ever seen, plus some very "gassy" model cars. I photographed everything in view and they will be appearing in future issues, so keep a watch out for them. I will also be covering shows in Chicago, St. Louis and Los Angeles. I will keep you all posted on the very latest modeling trends.

I also will give you a completely detailed story of the Munster Koach in your next issue of Model Car Science — so watch your magazine stands and keep posted.

One more little teaser before signing off. We are now building for Chuck Miller of Sherman Oaks, California, at our Kustom City plant in North Hollywood, a "T" Roadster called Beau-"T" which in French means beautiful "T". This car will be on the front cover of Popular Hot Rodding Magazine in the near future. The Beau-"T" will have a Lemon-Lime pearl paint job and will be a completely channelled '27 "T" body, molded into one piece with rolled side bellies and rear pan, with a '57 Buick engine with injectors, Skylark wheels, a full size high top and something new: four cubic square French headlights.

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THE "LITE-NING" CHASSIS

"TAKE A PEEK AT SOMETHING UNIQUE"

FIRST REPORTS BIG NEWS IN CAR KITS

Ferrari, the most awesome name in international motor racing, has joined the Monogram Models, Inc. slot racing team. And it's a double entry — not one car, but two.

The cars are the 1964 record-setting Le Mans winner, the Ferrari 275P, and the 250 GTO/LM, which took the 1964 Daytona Continental in its first outing. The first kit is in 1/24 scale and the second is 1/32.

Both racing car kits also are paired with "twin" collector's scale model kits.

The 275P (for prototype) took the 1964 Sebring race, defeating even its bigger brother, the 330P, then repeated its performance at Le Mans with a record average speed of 121 1/4 mph for a distance just short of 3,000 miles in 24 hours.

Monogram's version aims to compare speeds on a new, larger Tiger X-200 motor. In combination with a new lightweight brass frame and the low-profile

MONOGRAM

body, the racing model has won every test race in its class.

Other race-winning features include a low center of gravity that permits driving through the turns at higher than usual speeds and Tiger-Traction tires that put to work all of the power in the new motor.

The Ferrari 275P (Kit SR 2408) retails for \$6.98.

The Daytona-winning Ferrari 250 GTO/LM is a new version of the Ferrari GTO that was homologated (accepted) in 1962.

Its new LM (for Le Mans) body was aerodynamically designed to decrease the frontal area, thereby improving the car's speed and cutting fuel consumption. The roof line was bobbed off sharply and the rear window was deeply recessed. The top of the roof also was recessed to form an airfoil at the trailing edge. The remainder of the body was reshaped and lightened, giving a wide, squatty appearance.



Monogram Models, Inc. molds 1930 Ford Station Wagon in wood-grained plastic to simulate wood panels of famous "Woody Wagon." Car goes "wild" with 283 cu. in. Chevy engine with six Stromberg 97 carburetors, Weiland Drag Star manifold and Scintilla-Vertex magneto, all chrome-plated. Two surf boards are included in kit. Wagon (Kit PC 103) retails for \$1.49.



Ferrari 275P took the 1964 Sebring 12-hour race and went on to set a new record for the Le Mans 24-hour endurance test. Monogram Models, Inc. has reproduced the Ferrari in a 1/24th scale racing model. Racer features powerful new Tiger X-200 motor for race-winning speed. Kit SR 2408 retails for \$6.98.

The car runs on a race-proven Ferrari 3-liter s. o. b. c. V12 engine. With the aid of six dual throat Weber carburetors, it develops 330 hp (SAE) at 7500 rpm.

Monogram's car has a low center of gravity that gives it excellent handling in the turns. It runs on a new hot Tiger X-100 motor and has Tiger-Traction tires. Other features include precision aluminum wheels and brass frame.

The Ferrari 250 GTO/LM (Kit SR 1205) retails for \$5.98.

Monogram has also taken the "mild" 1930 Ford station wagon and turned it "wild" with a 283 cu. in. Chevy engine with six carburetors. This 1/24th scale Woody Wagon also features an operating tailgate and two surf boards.

The highly-modified Chevy engine in Monogram's version is chrome-plated. It has six chrome-plated Stromberg 97 carbs mounted on a polished Weiland Drag Star manifold. The spark is supplied by a Scintilla-Vertex magneto.

Other "wild" touches include chrome-plated wheels with deep-dished reversed rims on the front and mag racing wheels at the rear. The M&H drag slicks, white-wall inserts and knock-off caps complete the sharp details.

The body and surf boards on this \$1.49 kit are wood grained to simulate the original woodwork.



Display model of Ferrari 275P by Monogram Models, Inc. was copied in 1/24th scale from car made available by Luigi Chinetti, three-time Le Mans winner who is Ferrari distributor in the United States. Kit is display "only" of Ferrari 275P racing car introduced by Monogram. Kit PC 102 retails for \$1.49.

FIRST REPORTS

BIG NEWS IN CAR KITS

The 1965 cars are rolling off the lines in Troy, Michigan at a faster rate than those in Detroit. If you didn't already know Troy is the home of AMT.

Strongest demands to date are for the Slot Star kits... the '65 Sting Ray, Mustang and Cobra, plus the '57 T-Bird. Powered by high performance "Goove Master" motors, these lightweight movers are highly detailed. All bodies are of one piece construction and can be customized with spare goodies from AMT's regular kits. Priced at \$6.00 each, these kits promise real competition to any contender.

For the display modeler, AMT hottest item in the hardtop field is the '65 Sting Ray Sports Coupe. This 1/24th model can be built stock, drag or road race. Drag fans will like the Hedman headers, Weber carbs, Hilborn scoop injector, supercharge "Moon" timing gear,

AMT

side exhaust stacks, vinyl slicks, drag chute and push bar. Road racer's goodies include "Grand Sport" hood scoop, wide mag knock-off rims, Lucas road lights and many more extras.

Blended for stock, custom or advanced custom, the 1965 T Bird from AMT has many new features. These include a custom grille, headlight covers, nerf bars, soft up top, custom roll pan, tach and tape recorder. Rear-end treatment is all new from tail light housing to custom bumper.

Each part for the exclusive '65 Lincoln Continental station wagon was specially styled and designed by Dean Jeffries. This wheelie's wagon can be built as a stock or custom convertible as well. Woodgrain vinyl side panels, chrome luggage rack, special conversion hardtop top and full side and rear glass windows are but a few of the outstanding features on this beauty. Speed accessories for drag fans include a four-barrel carb, chrome six bladed fan, ram power manifold, and cast aluminum valve covers.

Wheels that actually turn, hood and trunk that open and close, custom rear bumper and tail lights, clear convert up top, loose rear seats, spare tire and

jack on a super detailed chassis system are just a few of the authentic details in the 1965 Ford 500 XL Convertible. Other extras include Cibie headlights, custom grille, re-worked bumper, high racer hood bubble, Crogar SS mag wheels, and racing slicks.

Custom fans will like the scavenger pipes, custom wheels, custom console, record player and optional steering wheel on the '65 Barracuda. Powered by a hot 426 Hemi-Charger V-8 engine, air fed by a MoPar hood scoop and slowed down with a Bonnie version parachute, this straightaway honker is ready to go.

AMT's '65 Hemi-Charger Dodge Coronet has all the special go-part goodies, including a full blown "426" hemi-head engine with a big GMC 6-71 out eyes injection supercharger. Other great features in this \$1.99 kit include the competition hood, ramcharger hood scoop, charger roll pan, American mag wheels, deep racing wheels, Goodyear whites, M&H 8.00 x 15 racing slicks, nerf bars, chute pack, buckets and three piece roll bar.

For the modeler on a budget, or for experimental customizing, the '65 Chevrolet Malibu Super Sports Coupe, the '65 Valiant Signet Hardtop and the '65 Chevy Nova Super Sport Coupe all offer many authentic details for only \$1.00.

AMT has also re-released five of the "most wanted" cars of a few years ago. The '60 Ford Starliner; '60 Pontiac Bonneville; '59 Mercury Convertible; '59 Chevy Impala Convertible; and the '56 Ford Victoria. Each of these cars is designed for easy assembly with AMT's exclusive snap-together feature. All of them have many extras such as wheel wells, chrome goodies and customizing decals.



65 CHEVY I



65 CHEVROLET MALIBU



59 MERCURY CONVERTIBLE



65 LINCOLN CONTINENTAL WAGON



65 MUSTANG



65 T-BIRD CUSTOM CONVERTIBLE



65 VALIANT SIGNET



65 COBRA



65 CORVETTE ROAD RAC R



PLYMOUTH BARRACUDA



65 STING RAY



1960 PONTIAC BONNEVILLE



65 CORVETTE CONVERTIBLE



60 FORD STARLINER



'57 FORD T-BIRD
FEBRUARY 1965



FORD GALAXIE 500 X

FIRST REPORTS

BIG NEWS IN CAR KITS



REMOVABLE TOP AND BOOT ARE FEATURED ON THIS 500K



JO-HAN

1934 Mercedes-Benz 500K

If you were pleased with Jo-Han's first "Gold Cup" release, the 1931 Cadillac, you'll flip over their latest effort . . . the 1934 Mercedes Benz 500-K Special Sport Roadster in 1/25th scale.

Some of the most outstanding features on this great classic are steerable wheels, operating rumble seat, double spare tire, removable top and boot, super detailed engine and chassis, chrome spoke wheels, opening hood and detailed interiors. You'll find no rubbing or scratching of parts in this \$198 kit as every part is securely locked in a frame. Easy to follow instructions and numbered parts virtually assure a beautiful looking assembly job. As an added bonus, Jo-Han packs a large gold cup in each kit.

Both the engine and chassis are super detailed for added realism.



HOOD OPENS TO SHOW SUPER DETAILED POWER PLANT



5 X CHROME SPOKE WHEELS WITH WHITES ARE INCLUDED

For added authenticity, a Jack (for left) and an operating rumble seat are bonus goodies.

MODEL CAR SCIENCE

Looking for a great new idea for a Competition Machine? Then try this . . .

HOT Hauler

By Don Lenaker

TO START CONSTRUCTION of this wild competition truck, a Monogram '40 Pick-Up and AMT's '40 Willys and '32 Sedan kit will be needed.

By reducing body area the flow of disturbed air is also reduced, therefore we will remove a large portion from the cab. Chopping can be accomplished by two methods. First, it can be done by taking a piece out around the cab and then adding a piece to the roof to realign front posts. Second method, which will be incorporated into this article, will be to remove (1/3 inch) and then bend front post, by heating them, until they align.

Tack glue both doors to the body. Be sure doors are completely dry before proceeding to chop the cab. Measure 1/4 inch out of the rear window with pencil. Be sure these lines are straight and true. Using a razor saw, remove 1/4 inch from



back of the cab. Using a ruler, place it across cowl and mark front posts as close to cowl as possible. A ruler is used here to be sure that the posts are marked evenly. Cut the front posts with razor saw now, and file cab posts, front and rear, flat and straight. The closer the roof goes back together, the less time it will take in finishing it off. Front posts should be heated in water and with steady pressure bent forward. Be careful not to get them too soft by heating. Occasionally check alignment so as not to bend them too far.

Place roof on cab and using pencil mark front posts. Now check alignment of both roof and cab. File pieces until they fit as well as possible, then remove top door posts and glue roof to cab. Now, using a good grade putty, fill in all cuts and scratches. As soon as roof has dried (about 4 hours) remove doors



HOT Hauler

by using an X-acto knife. Sand the cab with #400 sandpaper and finish off with #600 paper.

Give the body a good coat of primer and let aside until dry. Mount the doors to the cab where door posts have been removed. While the door is in position, check to see if the door posts will have to be slanted backwards. If so, using razor saw, cut an angle out of inside of posts. Bend posts back and fill in with putty. Place top of door posts in position with tape and mark evenly with marks previously put on the cab. File all body moldings from doors. Glue doors together and fit in cab to check their alignment.

The frame will need only these minor modifications to adapt the truck. Remove complete side flange and wheel well on frame. File this area smooth and sand until cherry. Frame can now be painted and assembled following instructions in kit. The engine supplied with this kit can be used or another engine can be transplanted without too much extra work.

Now take the fender assembly and remove 5/16 inch from insides of the fenders. File this area until all saw marks are gone. Remove pick-up deck with razor saw. Remove cross-member

and fender assembly with razor saw, also. Now remove running board flanges from fender assembly. Taking the bed, measure 3/4 inch from front and remove this portion. Be sure to cut this piece straight. Turn deck over and remove both underside flanges. File this area smooth. Taking pick-up deck, measure 1/4 inch from front and measure back 1-3/8 inch from first line and mark 1/4 inch into sides. This portion is to be removed. Remove 3/4 inch from bed sides making sure that these cuts are straight also. Now tape bed sides to the bed one at a time and draw free-handed a half circle same width as removed deck area. Now glue the bed sides to your bed. Cement bed front now also. Fenders can be glued on now.

The right rear fender should be filled in where spare tire goes. Let this area dry and then sand smooth and prime. All hood moldings should be removed by filing. A hood scoop can be made now by cutting a large enough hole for the scoop provided in the kit or one can be fabricated from a fender. Using a razor saw, remove rear portion of fender and glue it over the hole in hood. Putty around the scoop and sand smooth.

A fire wall will have to be re-designed. Cut out center of the fire wall, as shown

In picture 39. The wall can be squared off or left rounded. After it has been reworked, glue the fire wall into stock position.

New wheel wells should be made now. Look through your scrapped model parts and locate any car frame such as '57 Chevy, '57 Ford, any '63's or '64's will also be satisfactory. Using a razor saw, remove front fender wells and glue into position on the pick-up bed.

The "Hot Hauler's" interior can be made from AMT's Willys kit. First cut off all side panels, then remove 1/4 inch from the rear of the floorboard. Door panels can be used by removing 1/4 inch from the posts. Now, add a roll bar and other safety equipment to the floorboard. Windows can also be used from this kit by chopping 1/4 inch from them. Tinted windows can be made from colored cellophane.

All parts should be sanded smooth and primed. Be sure to be careful when sanding the cab as it is still fragile.

After the hauler is painted, doors can be hinged as shown in instructions. Deck tarp provided in the kit can be used just by shortening it 3/4 inch. A tarp can also be made out of a more realistic material. With these modifications your haulin' truck should be complete.



1. Glue door into body.



2. Body is marked to have 1/4" chop.



3. Use razor saw to chop top.



4. Cab is shown with rear chop completed.



5. Use ruler to locate cutting position for lower posts.



6. Use razor saw to cut front posts.



7. Cab is shown with top removed



8. Bend front posts slightly forward after heating in water.



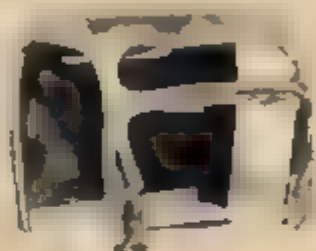
9. Align roof onto cab and mark front posts.



10. Use razor saw to shorten front posts.



11. Check alignment before gluing body together.



12. Body is shown in puttyed condition.



13. Mark cab where the posts end.



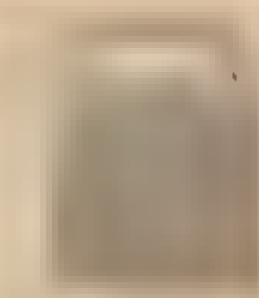
14. A corner might have to be removed from door posts.



15. Placing door posts into position, mark according to marks on cab.



16. File all moldings from doors.



17. Door is shown in completed stages.



18. Using razor saw, remove side flange and wheel well.

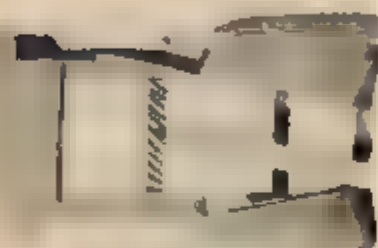
HOT Hauler



19. Note comparison between completed and unaltered frame.



20. Finished frame with engine, tires, and wheels.



24. Remove cross-members from under assembly.



25. Running board flanges are removed from front fenders.



26. Rear deck is measured for shortening.



30. Bed sides are on pick-up checked for wheel clearance.



31. Completed pick-up bed is shown.



32. All body moldings are filled off hood.



36. Pick-up is shown with new wheel wells glued into place.



37. Remove all interior panels from Willys floorboard.



38. Floorboard is shown with panels removed.



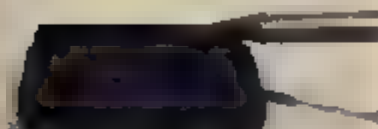
21. Remove area on inside of fender wells.



22. Remove pick-up bed with razor saw.



23. New deck is being removed with razor saw.



27. Remove flanges from under pick-up bed.



28. New wheel wells on pick-up bed are marked.



29. Bed sides are measured to be shortened.



33. Hood is marked to be cut for injectors.



34. Hood has scoop glued on and putty is applied.



35. Using razor saw, remove wheel well from discarded frame.



39. '40 Ford firewall is marked for engine clearance.



40. Firewall is shown with areas removed.



41. Cab is shown with firewall in place.

MODELING

MOTORCADE

Continuing its sweep through the country seeking the best in modeling talent, MCS once again presents an exclusive collection of really new customizing ideas.

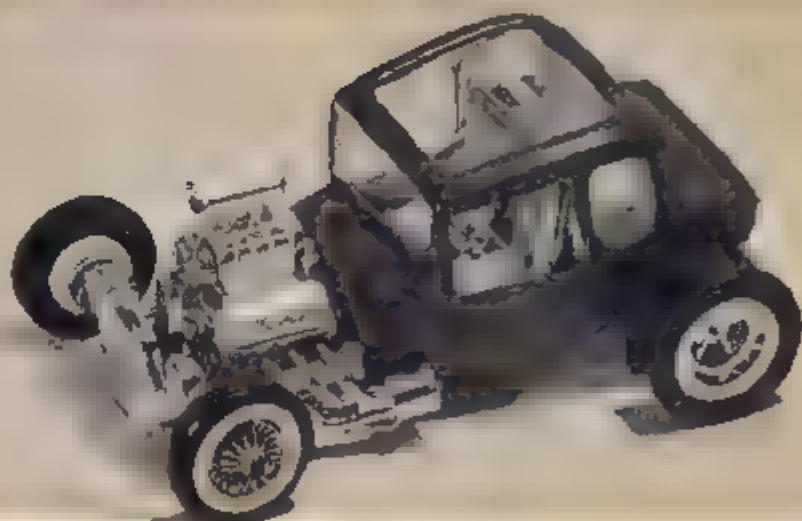
THERE IS STILL TIME to enter the Revell-Teslor International Model Car Customizing Contest --- and win a 1965 Chevy Corsa.

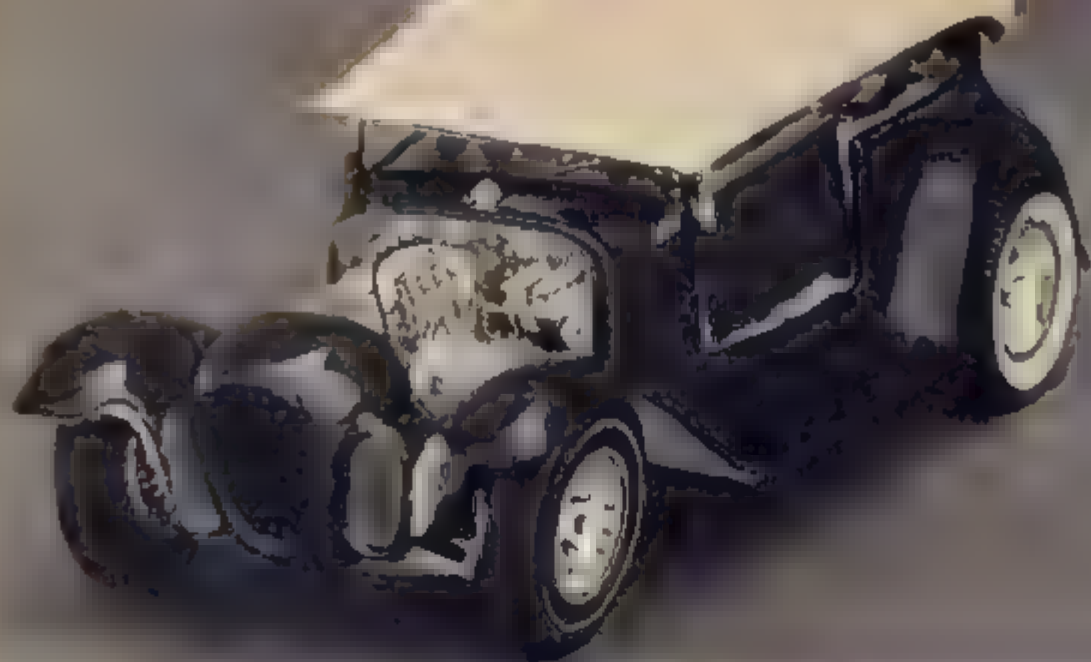
These contests are being conducted in conjunction with the International Championship Auto Shows in major cities across the United States and Canada. As of the writing of this article, there is still half of the show car circuit to go. The schedule for February includes Cincinnati, Ohio; Dallas, Texas, and Indianapolis, Indiana; while March will see Norfolk, Virginia; Buffalo, New York; Toledo, Ohio and Boston, Massachusetts. Then the last contest of the year, which will also be where the International Championship awards will be presented, is in Washington, D.C., April 2, 3 and 4, 1965.

The contest is easy to enter — no entrance fee, nothing to buy, and no "gimmicks." In fact, anybody can enter a model car in these contests.

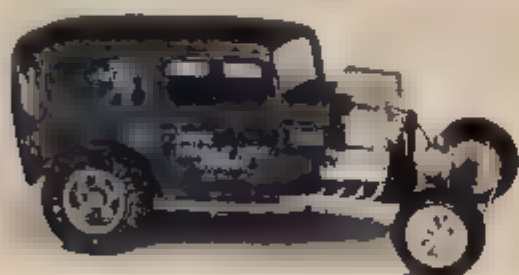
Perhaps these winning entries will give you a few ideas so that you might be able to get in on the action and perhaps get a chance to win the 1965 Corsa. There is still plenty of time. Check your local hobby shop to be sure of the exact dates of the Revell-Teslor International Model Car Customizing Contest in your area.

Bentleyville, Pennsylvania modeler, Gary Camposi shows his skill with early Fords. Note the full length pipes on the bottom rod.





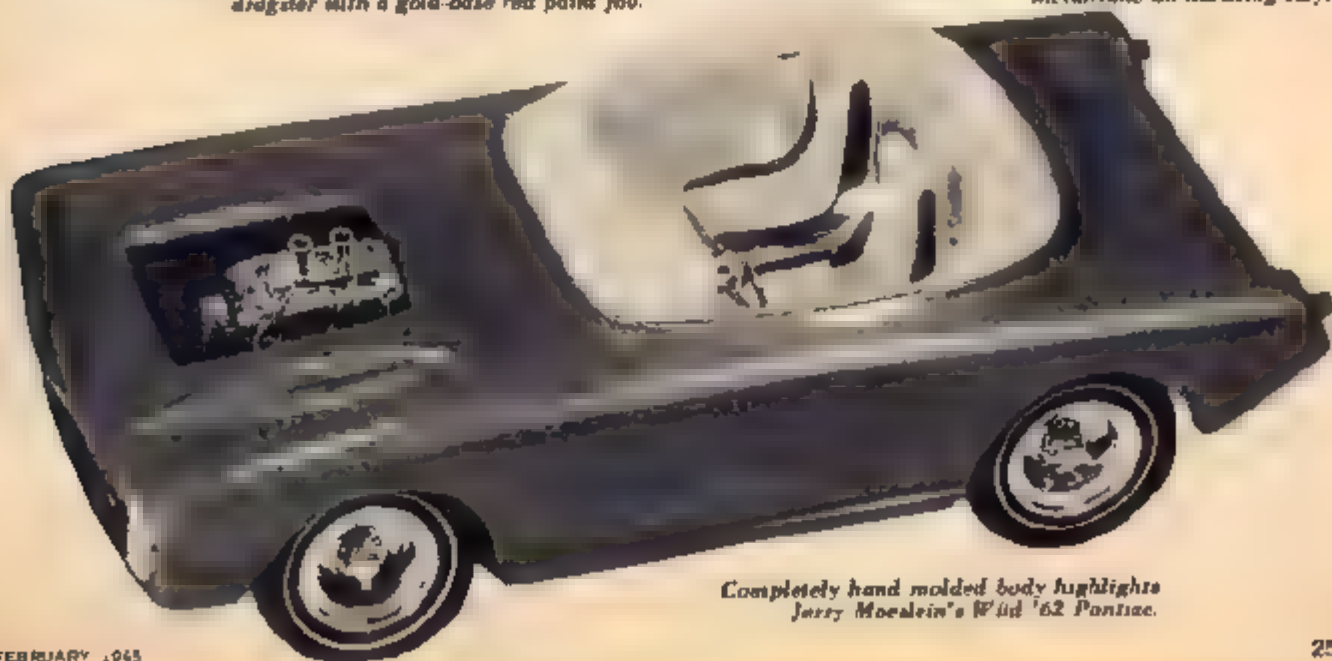
Bryan Price, 15-year old modeler from Warwick, R.I., radically customized this entry. Hull is fully wired and interior is upholstered.



There's lots of "go-appeal" in Jim Hannawald's '32 Ford dragster with a gold-base red paint job.



Waukegan, Ill. customizer, Gary Nichols used Aztec gold metalflake on his Sting Ray.



Completely hand molded body highlights Jerry Moeslein's Wild '62 Pontiac.



Joseph Kricho from St. Louis, Mo., shared the body and hinged the hood on this '63 Vette.



Lots of air and little comfort would be the story here.

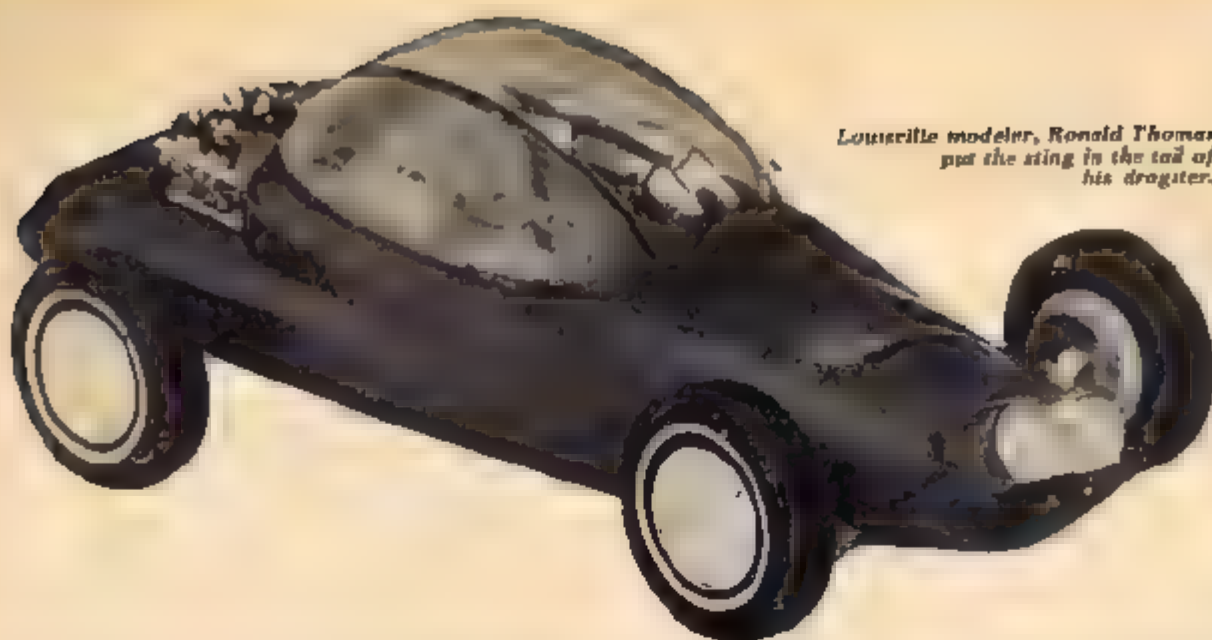


From Miami, Fla., comes Joey Ajelvonder's dragster.



Ever see a three-wheeled Ford coupe? Wedonich, Ohio modeler, Gary Falber has.

MODEL CAR SCIENCE



*Louisville modeler, Ronald Thomas
put the sting in the tail of
his dragster.*



A working floor shift and fully wired mill top off Jerry Sullivan's '49 Merc. Doors open also.



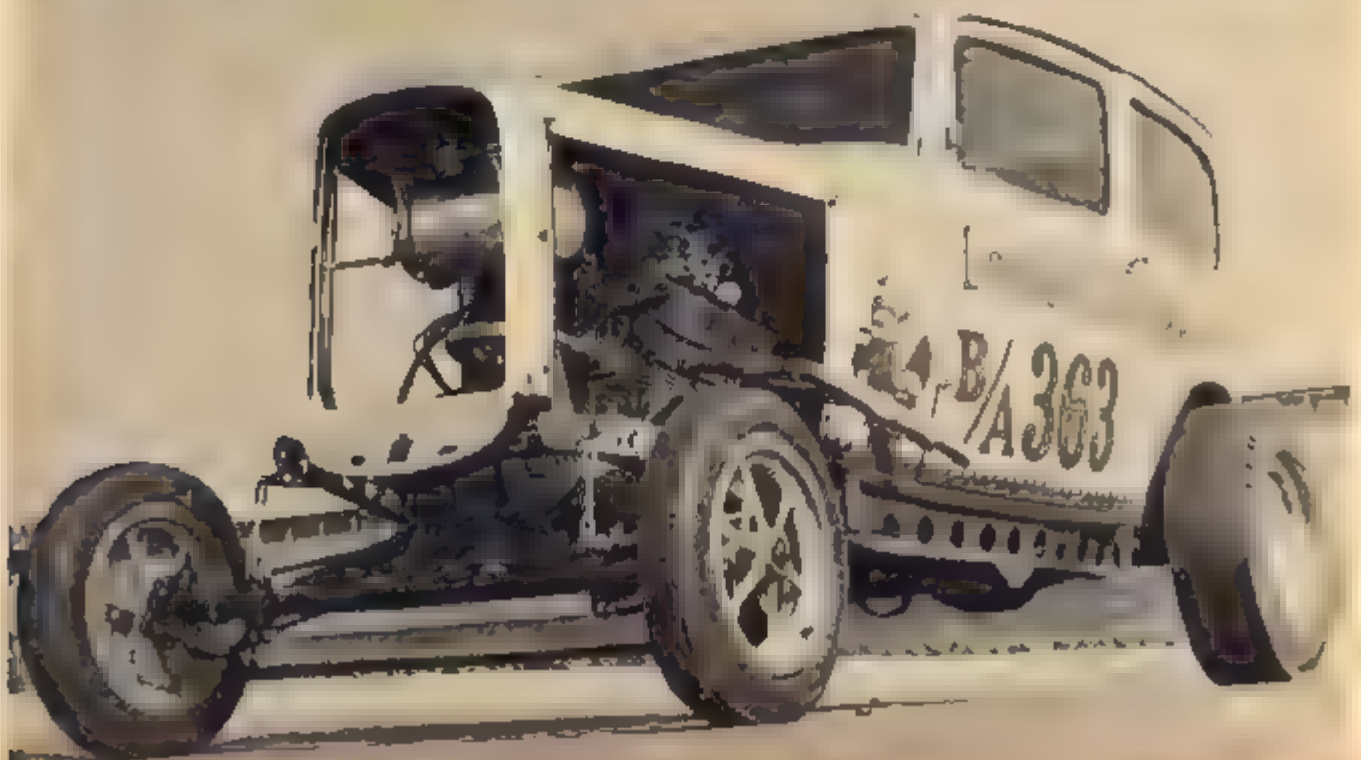
*This started out to be a '29 Ford but Jack Herndon
had other ideas.*



*Daniel Diskner, Charleston, W. Va. modeler has a
'40 Ford that's ready to race!*

GREAT CARS

RAMCHARGED **DEUCE**



AND HOW TO BUILD THE MODEL

BY BOB HOEPPNER

THE BIG 426 cubic inch Dodge Ram-charger engine is a seasoned campaigner on the nation's drag strips. There is no novelty in this, but to find one coupled to the stock TorqueFlite Automatic Transmission in a B-Altered '32 sedan is something of a novelty.

This one, put together by John Watson, calls Buffalo, New York its home when not appearing on the strip.

The basis for our model is one half of the A M T Two-In-One kit that includes the Willys and '32 Ford Sedan #2532. From this we will use the body frame and glass.

First remove all frame cross members flush with the inside of the rails. These are then glued to the bottom of the body sides in what would be stock position (the kit frame is too narrow). Install a rear axle from the Revell Willys kit directly to the frame rails, as no rear springs are used. Install a straight tubular cross member at the very front of the frame horns and a generous sized spacer block between it and the front spring. This one rides high off the ground in the front, to gain added weight transfer coming off the line.

The straight tube axle spring and radius rods are from the Revell Roadster speed equipment kit #C1132. A M T and Revell both have wheels and tires for this set up, you may have them in your spare parts box so take a look, they are American Dragster spoke in front and reversed rim late model stocks in the rear and of course nine inch M & H sticks doing the pushing at the rear.

The engine is identical to the one in the Tony Nancy dragster kit except for the intake system. The manifold will have to be scratch built, the four barrel carbs appear in many kits so they should not be too hard to locate.

The engine is located as far back as the rules allow. The number three exhaust stack just clears the forward edge of the body and the fourth stack on each side projects through a hole in the body.

Eliminate the hood side panels and the web inside the radiator shell. Install the Moon fuel tank to the underside of the hood, just behind the shell.

A new floor board and fire wall will be required, they may be made of card stock or thin sheet plastic. The fire wall



The kit frame is not authentic in that it is too narrow and locates in a channeled position.



Outside edge of body should just project over side of frame for proper relationship. This will require adding width to cross members.

should fall at about the front edge of the doors.

The driver's seat, surrounded by a roll bar, is on the left side just forward of what would be the rear seat.

A transparent plastic insert replaces the original in the top.

As a last thought, don't forget the lightening holes on the sides of the frame rails.

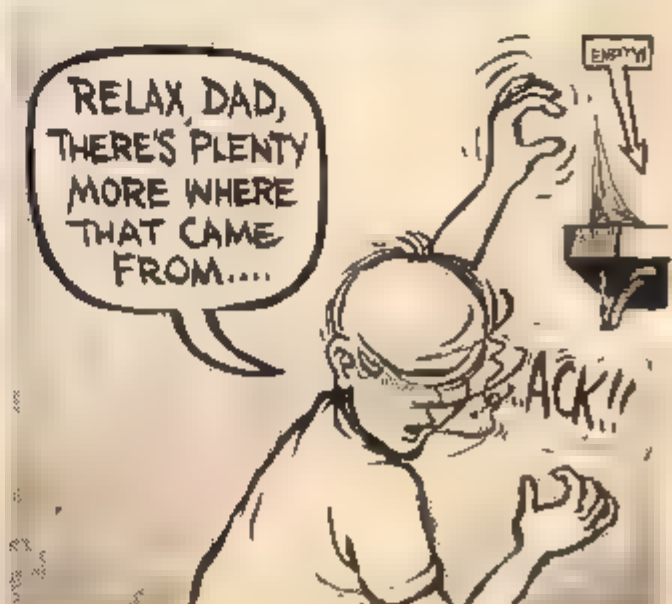
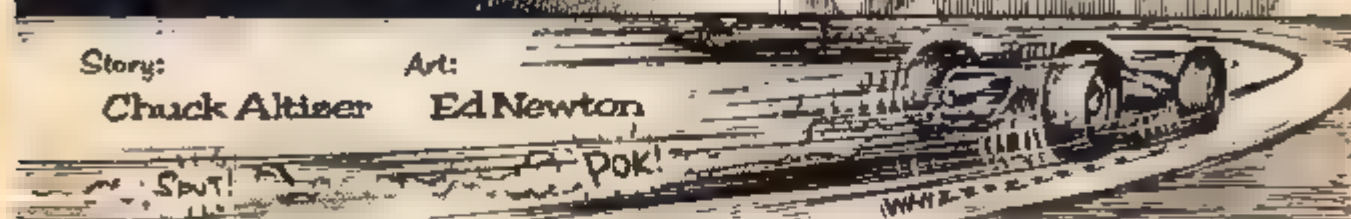
KIT CARSON

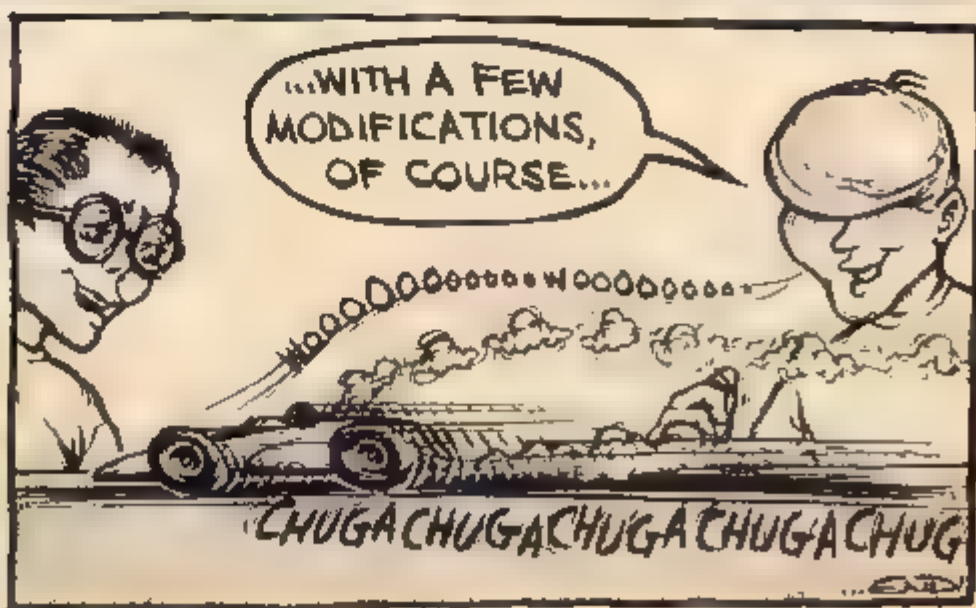
Story:

Chuck Altizer

Art:

Ed Newton





The Livin' END

MCS Evaluates the Newest Techniques Now
Employed In Rear End Styling

By Robert Hoepfner

Photos by Chan Bush



An excellent example of adapting the inset panel theme to an existing body form. Note the graceful way all contours blend into each other making the car appear to have been designed that way. Taillights do not disturb the smooth lines, being installed at the ends of the inset. Club plate could be replaced with license plate for street operation.



This idea is well adapted to the blunt lines of the bath tub. Here the lines are sharper, contours tighter, in keeping with the basic body shape. The pin striping accentuates the crisp edges of this model but would be lost on the previous car with its soft flowing lines.



While not as pronounced as the previous rear panels this one falls into that design theme with the rectangular inset. This entry had a very interesting design idea. The entire midsection of the top was one continuous section of glass from the dash board to the base of what would have been the rear window. To compensate for the lack of structural strength in the roof area, the side panels incorporated a generous rib at their inboard edge. This rib started at the front and continued to the lower rear edge of the body.



A very neat and clean G.T. prototype model. It does not contain anything original or new but has been very well executed. The flat back design has been used extensively by many European body designers for G.T. and sports cars the past few years. This one is concave rather than flat. Styling would place it in the same general category as the previous models.

Of the many entries in the Revell-Patra 2nd National model car contest a very few win the top honors and awards. Just down the line below the winners are a number of outstanding entries but for the lack of a few more points could have been in the winner's circle. Also ran entries quickly fade away while the trophy takers receive all the glory. As stated last month, many of these cars are excellent examples of the art of building custom models, some in their entirety, others for outstanding details either in concept or execution and should have their share of spotlight time. The first article appearing last month described a complete car. This month we will concentrate upon details of rear end styling only. Future articles will describe other interesting items as well as complete cars.

The subject of styling as it pertains to automobiles is a very controversial subject. Any of us would be hard put to find among a group of our friends any one car that would be accepted in its entirety by everyone, however certain features will find approval by the majority. These items then tend to find their way into the custom cars, be they full size or our models. The skill of the customizer shows up in how well he can integrate these features into an overall concept that is pleasing to the eye, maintains good form and balance, and above all be practical.

In analyzing the photos you will find individual interpretation of some of these trends, such as the inset rear section, sculptured panels and tunnel lights are a few. Each has its own individual character. We do not expect you to agree with our comments accompanying each picture entirely as each of us see things in a different perspective and have various likes and dislikes. We have attempted to keep personal likes out of it and to just describe each in a fundamental, constructive manner. In the end, we should all profit as it will no doubt stir your imagination into analyzing your next car a bit more thoroughly before starting construction.



A well executed example of highly sculptured panels on '32 Victoria body that has been sectioned to the extreme. Notice how the fender lip flows into the ribs on the rear panel. Our main objection to this is that no provision for a license plate has been made. The addition of one would spoil the appearance.



Another rendition of the same basic idea. The highly sculptured rear panel shows originality but again eliminates the installation of a license plate, however, you could be installed below the lower edge on this one as there is enough ground clearance. In this position though it would look like an after thought. True, show cars do not require licensing if they are not driven on the street; But all the models so far discussed are basically street machines and as such should provide an area for mounting plates.



Major revisions are not required to change the character of any car as indicated by this '49 Ford. The only big change is in the large depressions in each fender that now contains the taillights. The shape chosen for the recess does not blend with existing contours too well and could be considered slightly oversize as they dominate this area. The rear pan has been rolled under to match the fenders and smaller split bumpers installed presenting a neat and clear appearance.



This pick up bed has an interesting new approach to its styling. Notice how the vertical top lip has been blended gracefully into a horizontal fin, and the fenders become an integral part of the bed, rather than additions to prevent mud clinging. The contours chosen for the rear of the fenders flare outwards to form a second fin to compliment the upper one. The taillights are well placed and add a continuation of the vertical lines of the tailgate. The only disadvantage we can see would be in the vulnerability of the fins to damage.



Neat, clean and simple, describe the treatment of this rear end styling. The long, horizontal taillights tend to add to the feeling of width and help make it appear lower. A touch of asymmetrical styling appears in the stripes and gas cap location.



Overall concept here is a very harmonious imbalance. The rear end is composed of numerous flat planes intersecting at various angles. The single taillight is offset to the left in a deep recess that follows the contours of the panel. Asymmetrical styling is carried through to the paint job, which is a two tone metalflake following contours established by body panels.



CONTEST WINNERS



John Vitrano of Milwaukee began his customizing job with a '64 Sting Ray, but you'd hardly recognize it now! The engine is now a Corvair mounted just ahead of the rear axle. Every detail has been included in this wild, wild sports-like streetster.



Don Culp takes home this month's \$25.00 Savings Band for whipping up this way out custom pickup made from the trailer in the AMT Silhouette kit. The basic hauler was swapped end for end, half of the top saved for the bubble and a custom grille put where the tailgate once rode. Power is by Kessel's Turbine mounted beneath the pickup bed floor. The Pocahontas (Ark.) half-ton shows what real creativity can do.

Sheldon Louinas, well known modeler to MCS readers, shows off his latest car. It's a '62 AMT 'Fette with asymmetrical styling. Bubble is from the Precisa kit and the charger is finished dark blue.

Unusual styling is the feature of Don Mitchell's '40 Ford Sedan. Open front wheels have permitted the building of one of the wildest front ends yet

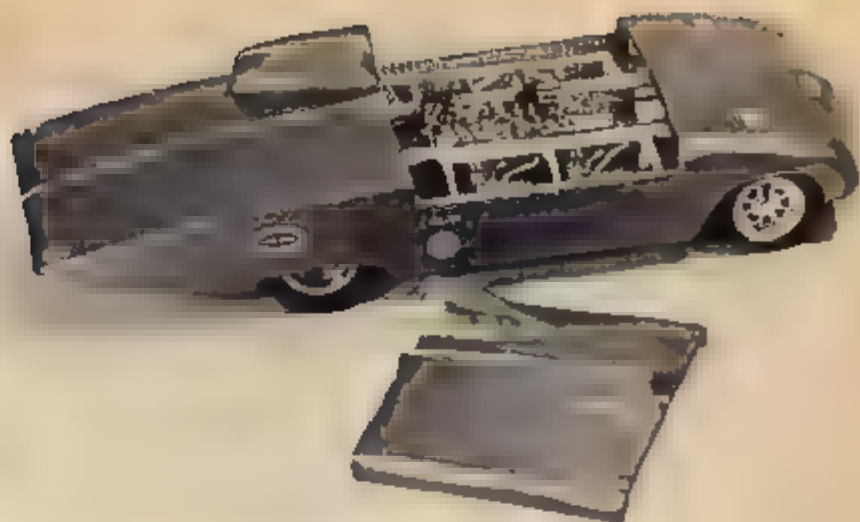


Black Jack in the title Rick Vermeulen has bestowed on his Aurora-based '34 Ford. Rick shows us how they build models in Schiedam, Holland? (Above)

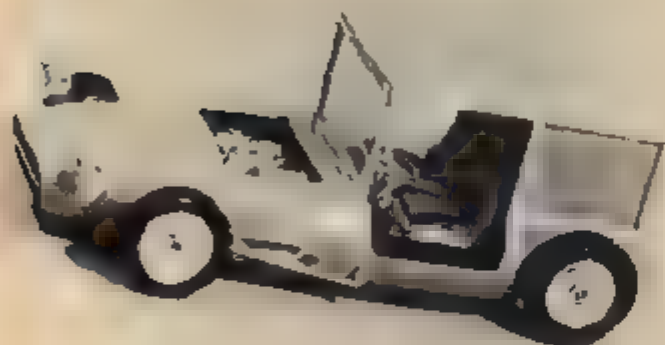
Jud Burr, from Asheville, N.C., sends us his photo of a wild '53 Ford pickup with removable cab. Detailing is evident with the front end removed (Left).

Sectioning has dropped Bob Pharr's '39 Ford 2-door, yet it stands tall off the ground as it's a competition car (left below). Jon Byerum, 15-year old modeler, has put a tarish paint job on his '32 coupe (below)



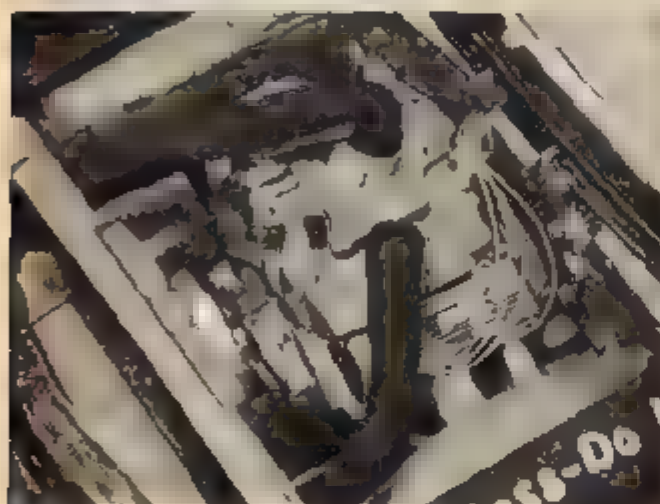


Engines galore dominate the innards of Allen Boldowski's land speed record car which started life as a docile '57 Thunderbird.



Here's a nifty scratch-built Woody by Brian Ames (left above). Beside it is Don Schumann's '40 Ford, as neatly finished as they come. Below, Joe Blanchard has gone all-out on his '32 Ford by AMT with a Lincoln engine.





A '62 Chev hardtop has been turned into a real (and beautifully detailed) glamour wagon by Henry Berger of Kenosha, Wisconsin. It's a draggin' version with oodles of hand lettering warning bystanders of its "glass" front end. Even the interior is detailed.



Canadian Norman Gagne has built himself a Scarb that's something to behold! All that glitter protruding from the engine compartment is a blown Chrysler.

Nine-year old (1) John Lux of Los Angeles put together this '34 Ford track car, complete with a scratch built wing for stabilization.



TABLE TOP RACING SECTION

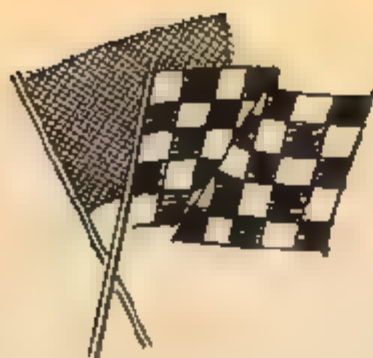


PHOTO CONTEST

Each month Model Car Science will award valuable prizes to the readers who submit the best photos of slot racers in action. Send your photos to: Table Top Photo Contest Model Car Science, 171 Barrington Pl., Los Angeles 49, Calif.

THIS MONTH'S
PHOTO CONTEST
WINNER IS

ED SKI
24 Winding Way
Haddonfield, N.J.



FORD & AURORA *Sponsor* WORLD'S RICHEST AUTO RACE

Thomas Kilduff of Kingston, Pa., became winner of the world's richest auto race when he lopped seven other regional winners for the title of "Ford-Aurora Grand National Model Motoring Champion." Co-sponsored by the Ford Division of Ford Motor Co. and Aurora Plastics Corp. of West Hempstead, L.I., this race carries a prize of a Ford Mustang and a \$2,000 Aurora scholarship, making it the richest contest in terms of actual racing time — less than five minutes.

Young Kilduff, a 17-year-old freshman at East Stroudsburg State College, who was the 1963 and 1964 Pa. State Champion and MINRA record holder, was also a member of the racing team. His skillful maneuvering of the HO scale cars placed him in the group of four semi-finalists and from there he displayed his talents to win the most coveted award in table-top racing.

The semi-finalist drivers — Thomas Appolina of Maspeth, N.Y., Jerry Todd of Eugene, Oregon, Kilduff, of Pa., George Mueller of Chicago, Andy Anderson of Minneapolis, Steve Schneck of Kansas City, Missouri, Craig Rollins of Provo, Utah and Mike Ferrell of Melbourne, Fla., had already won local, state and regional titles.

Although the semi-finals of the Grand Nationals were held before a selected audience, the finals were presented on nationwide television, Appolina, Kilduff,

Rollins and Ferrell appeared on "I've Got A Secret." Their secret — "One of Us Is Going To Win \$5000 in the Next Few Minutes" — was revealed as the boys stepped to the layout and displayed their top racing abilities.

Stirling Moss — considered the world's greatest racing driver, and Chief Steward of the Championship — conducted the race to its exciting finish when Kilduff was awarded a trophy, a Ford Mustang a \$2,000 scholarship, and the title of "Model Motoring Champion." Four years of intensive table-top racing, winning prize after prize, had led to this top trophy.

Over 1,000,000 entrants had registered at one of the 5,000 hobby shops throughout the U.S. that had participated in the race during the nine week program. Reg-

istered driver practice at home and on hobby dealers' race tracks. One racing night was held each week for eight weeks with a store run-off held the ninth week.

The store champion was then eligible to participate in state contests — and if successful — to the regional eliminations and then the Grand Nationals.

The eight finalists displayed the epitome of good sportsmanship — always congratulating each other for skillful driving and offering cars and tools to one another. Each boy is a winner receiving a stop watch, a year's supply of Aurora products, and a \$50 savings bond in addition to the trip to New York and the honor of being a semi-finalist in the Ford-Aurora Model Motoring Championship.



Steve Allen, star of CBS television show "I've Got A Secret" is shown here presenting a trophy to Tom Kilduff, the Ford-Aurora Grand National Champion.

Tension is mounting as the four finalists of the the Ford-Aurora Grand National Championship are completing their final laps under the watchful eyes of Steve Allen, star of the CBS television show "I've Got A Secret" and Stirling Moss, world's greatest racing car driver who served as the Chief Steward of the race.



Managing a Team

Running a Successful Team is Both an Art and a Science. If you're Ever Threatened With the Job, You'll Want to Try these Valuable Pointers.



By GEORGE SIPOSS

YOU HAVE BEEN ELECTED to be the manager of a slot car team. You have heard and seen announcements of upcoming long distance races, 500 lap race, 2 hour race on 8 lanes, 4 car teams, etc., and now you are a manager of one of them. Perhaps you are the father of an aspiring young driver or, maybe you are a club member for whom there is no room on the driver's team but you still want to take part in the race. You may not realize it but you now have just about the most important job on your team. As the excitement of the election meeting fades slowly, the real job is still ahead of you. Preparing and running a team until the checkered flag indicates that you have won. So now you want to know just how to do the job and what is there to be done.

Sports car enthusiasts know the legend of the famous Alfred Neubauer, superb tactician and cool headed manager of the world champion Mercedes-Benz team. Several books have been written about this famed expert of racing machinery and drivers. One thing is interesting to note and that is that whatever this man and his famed colleagues have done can be duplicated and should be duplicated in our miniature car world as well.

As prerequisites you should have a

cool head, ability to think quickly even under stress, some technical ability and a certain amount of skill with figures. If you are a student of human nature as well, so much the better.

Supposing that there is an announcement of a forthcoming race. You should start preparations now, while there is time. Obtain all information about the course and rules of the race. Clarify unclear points with the organizers, if necessary by correspondence or personal visit. Remember that your team might have to travel a considerable distance to the race, devote endless amount of time to building cars, spend money on component parts and, perhaps the stakes are high too. A misunderstood instruction or neglected rule may put you out of the race completely.

Thorough preparation is the key to consistent success. The team members will learn to trust you if they find that you are well informed. Make sure that all cars meet the specifications. You can make a small gage block that checks pickup flag depth, car width and other pertinent dimensions. Get the specifications of the actual car from sports car magazines and, in your spare time, convert all dimensions to your particular scale. When the scrutineer finds a questionable dimension, you will be able to prove that you are right.

Check all cars before the race for tight screws, electrical connections, motor

magnetism, clean tires etc. Do this alone so that you are truly double checking all components instead of taking someone else's word for it. Prepare spare parts for each car so that they are available at a moment's notice. Repair tools should also be readily available as well as spare hand controls.

Make sure that the drivers only have to concentrate on driving. Split second timing requires concentration and if they have to worry about other things their efficiency will fail. In effect, you will be their antenna for information coming in from the outside world.

The first time you will actually see action on the track is during practice. If the lane number for your car has not been chosen yet, make sure all your drivers get a chance to drive on all lanes. A knowledge of the advantages and disadvantages of all lanes on the course will help them during the race to plan their action and anticipate the action of other drivers.

The most important item for you to have is a stop watch. The sounds of slot cars can be deceiving. Only the watch tells the true story. Time your cars during practice and, if possible, time the cars of the opponents. Station yourself along various parts of the course for a short while and observe the cars going by. On today's giant courses, it is not uncommon for a driver to be 50 or more feet away from his car. His judgment and reactions are therefore quite different. You can indicate to him (by thumbs up or down or whatever signal you have agreed

MODEL CAR SCIENCE

upon) whether his speed is too high or low or just right for a part of the course that is too far for him to see or might be hidden from his view by a mountain or marshal. You can observe the behaviour of different tires and gears on different parts of the course and time them. Keep accurate records of all lap times because they will come in handy later on.

Knowing the temperament of your drivers is very important. Some might be nervous before the race: boost their morale. Others might be uninterested, learn how to stimulate them. Practice-lap-times of your team or other drivers may or may not be disclosed to them, at your discretion. If several drivers are allowed to drive a car, use the most skilled driver to start the race and build up a lead. Let the "houshot" take over soon to increase the lead or, should he make mistakes, to still have time to save the situation. Save the cautious driver for a sick car, he knows best how to nurse a car in to the finish. The iron nerve type should be your backstop for emergencies when a desperate situation will not allow mistakes made by nervous drivers.

As the race starts, you start taking lap times. Again, "Putting the stop watch on someone's car" can tell if he, or it, is performing better or worse than during practice. Some teams hold back intentionally to bluff the opposition. Never, never shout at your driver to hurry him. It is a game of skill, such as slot racing, it is suicidal to unnerv a man who is probably doing his best. In fact, a few soothing words will reassure him and let him really concentrate on doing his best.

Beginners often make the mistake of going "over their heads," especially right after the start. More experienced drivers just let the field sort itself out before pouring on the coal. Though it is the best policy to grab the lead early, nothing unnerves a driver more than de-slotting early in a race. Precious seconds are lost and the few inches of lead is soon turned into a grim battle to join the front runners again. Never let the drivers drive faster than they feel capable of doing. It is like playing blackjack. A pro will never go over 17. Some beginners gamble and win. More often than not, the law of averages rewards the cool player. You must make the drivers realize that only the cars which cross the finish line at the end of the race are considered finishers. An early crash or worn out car can cost you victory later in the race.

As the race goes on, check the performance of the car by the stop watch and by its sound. Should it seem necessary, have spare parts in reserve and discuss, in a few words only of course, the

situation with the driver. He will want to know the positions of the others and the remaining time, or distance, in the race.

Here is where the stop watch and mathematics come in handy. Let us examine a few hypothetical situations in which a well calculated decision can mean victory or defeat.

It is fortunate that the number of times on a course seldom if ever exceeds eight. Also, automatic lap counters can give you accurate counts of laps completed by all the cars. You are at an advantage over the Grand Prix manager who would have to rely on the inaccurate reports of his observers.

Supposing that, in a 100 lap race, the lead cars are turning steady 12 second laps. At lap 35 your team car suddenly slows down due to a mechanical failure and is two laps behind. You mentally analyze the trouble as dirty commutators and estimate (based on carefully timed "repair rehearsals" during practice) that a quick repair would take a half a minute. The repair plus an expert driver can hopefully reduce your lap time sufficiently to overcome your lost laps. Let us see how this looks mathematically, 65 laps remaining at 12 seconds (for the present leader) equals 780 seconds *provided* the leader maintains his speed at the present rate. 780 seconds equals 13 minutes. You need to do 65 laps *also*, plus the two laps you are behind. You have 780 minus 30 seconds left for actual driving. To do 67 laps in 750 seconds would require a lap speed of

$$\frac{780 - 30}{67} = 11.2 \text{ seconds.}$$

Thus, if you can repair the car in less than 30 seconds and therefore maintain 11 second laps you can overtake the leader just before the finish. Your decision therefore is to *call in the car*.

Some races are run on a time basis i.e. the highest number of laps completed in a given time wins the race. Suppose that in a 1-hour race the leaders are again doing 12-second laps. At the 45 minute mark your car needs repairs since you are 10 laps behind. Now, there are 15 minutes remaining in the race, equals 900 seconds. (Try always to calculate time in seconds).

$900 \div 12 = 75$ laps can be completed by the leader at the present speed. Therefore your car needs at *least* that *plus* the 10 laps you are now behind, i.e. 85 laps to complete in 900 seconds. If you hope to reduce lap times to 11 seconds, it would still take 85 times 11 equals 935 seconds to do the same laps as the leader but obviously this

would put you (935 minus 900 equals) 35 seconds behind him (35 seconds is almost 3 laps). The decision is of course *not to bring the car into the pits* but to carry on hoping that the leaders will have trouble too. As a point of interest, if you could, by effective repairs and Sterling Moss type driving, bring your lap time down to 10 seconds 85 laps would take you 850 seconds i.e. you could afford 50 seconds for repairs! This of course does not take into account the fact that overtaking a car usually inspires the other driver to a sudden, but usually short, burst of speed and passing in certain spots may be impossible. Thus in no case should you calculate your time to come in exactly even with the leader. Leave a few seconds safety margin unless of course you like to gamble.

Another situation might find three cars battling for the lead in a 100 lap race. Car "A" at lap 65, is leading and doing 12-second laps. Car "B" (your car) was right up to the leader (12-sec. laps) but its speed has suddenly dropped to 14 seconds. Car "C" is doing steady 13-sec. laps but is 5 laps behind, at the leader's 65 lap. Yours is car "B," should you bring it in for repairs or should you continue at the present speed and hope to beat car "C" to second place? Given speeds in this situation

"A": 35 laps to go = $35 \times 12 = 420$ seconds to finish.

"B": 35 laps to go = $35 \times 14 = 490$ seconds (thus 70 sec behind leader at finish)

"C": 5 plus 35 to go = $40 \times 13 = 520$ seconds behind "A"

Thus we see that if the present pace continues, car "B" would be 30 seconds ahead of "C" at the finish (if they are all to complete 100 laps) and the decision is *not to repair the car* despite the 1 second difference in lap times. Should the prudent manager of team "C" clock car "B" and note this difference, he might spur his driver to greater efforts in which case the situation might change.

Difficult, you say? It might be, BUT, these days we hear news of 24-hour races (in England) where even a complete motor change, accomplished in more than 30 minutes was worth the effort to salvage second place. Difficult? When the stakes are as high as the Austin Healey Sprite sports car in a recently announced race in Pennsylvania, the little effort it takes to consider all factors influencing the outcome of a race, it is worth it. The team manager is sometimes a forgotten man. His name seldom reaches print. His job, however, when done well is rewarded by the "thank yous" of the drivers and a well deserved victory.

DESIGNING an HO Super-Circuit

by Raymond E. Hoy

I've been on the 1/32 - 1/24th kick for so long, I've completely overlooked "HO." Until recently that is. Let me explain.

It was one of the "Evening-at-the-neighbor" affairs that I found had been planned for weeks, but somehow I had forgotten about. I usually am bored stiff at these affairs, and I'd much sooner be home racing than making small talk

about the weather with people I hardly know.

The evening turned out more interesting than I thought. Our new neighbors had lived nearby for about a month before we managed to get together for dinner. They were a young couple, and intelligent to talk to. The evening had progressed through dinner and into a comfortable, "easy chair-coffee cup" conversation period.

"You write for MODEL CAR SCIENCE, don't you Ray." Al said it as a statement more than a question.

My ears perked up immediately. An enthusiast? "Yes, for about a year or so now," I replied. This fellow REALLY is an intelligent chap, I thought.

"I read all your stuff. I'd like to see your equipment sometime."

Yes sir this fellow is DARN INTELLIGENT, I thought to myself. Ego is no small influence in a writer's life.

Legs should fit snugly in the corners. Bolts run through both leg and side rail adding considerable stiffness. When finished, turn the table right-side up.

Arrange the lumber on the floor, without fastening anything together, to get an idea of how it will look.



After you turn the table over, it should look like this.

"Would you care to see my layout?" Al said. Well man, that was too much. He led me off toward the basement and soon we were standing in front of a small "HO" layout.

I concealed my disappointment quite thoroughly, and made several polite comments about his track. It actually WAS nice, I had to admit, though a bit grudgingly. As I said, I had never been an "HO" enthusiast.

"Why don't you ever write about 'HO'?" Al said. It came out almost as an accusation, rather than a statement. I shrugged. "Just never got too interested in it, I guess." It even sounded like a lame excuse to ME. Al smiled like he knew something that I didn't and handed me a controller.

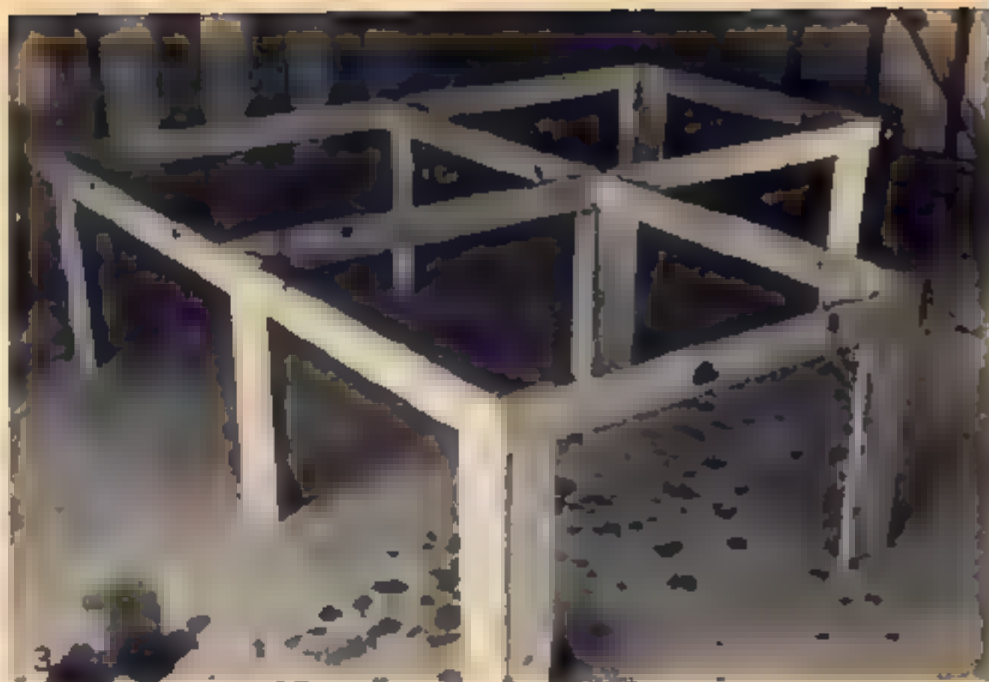
Well, that did it! I was so thoroughly hooked on "HO" after ten minutes of racing, that I knew I was about to spend another chunk on some new racing equipment. When I emerged from the basement with that old familiar wild look, my wife shuddered and told Al she'd never forgive him.

And I was off and running! I went the route. New cars, controllers, etc., and like most enthusiasts, I started with a complete set. In my case, it was a four lane Aurora thunderjet set!

You know the rest. I had to build my own. I have already built three large 1/32-1/24th scale layouts, so I was no beginner at track building. I figured to use my hard-won track building experience in the larger scales to guide my new "HO" layout to success on the first try.

This article is the first in a series dealing with building this fine track. The first part will describe the table construction of the track itself, with the third, fourth, etc., covering wiring, scenery, and

The finished table shows top sheeting in place and the bare framework covered with cotton.



so forth. When we are finished you will have the most beautiful HO layout you could ever want.

This table is going to be good size, for HO, and in the shape of an "L". If you don't want a table that size, I suggest using the "A" table portion, and delete the "B" part altogether. If you do that, you will have to change the shape of the course to suit your "A" table, of course.

Our table will be rugged enough to dance on, and it will be different in that it will be on short legs, instead of regular table height, as are most tables. I have found that after a long racing session, most people are looking frantically for a chair to sit in. With our table, regular chairs can be pulled up to the side of the table, and everyone can race in comfort, with their cars at just the right height while they are sitting in a comfortable chair.

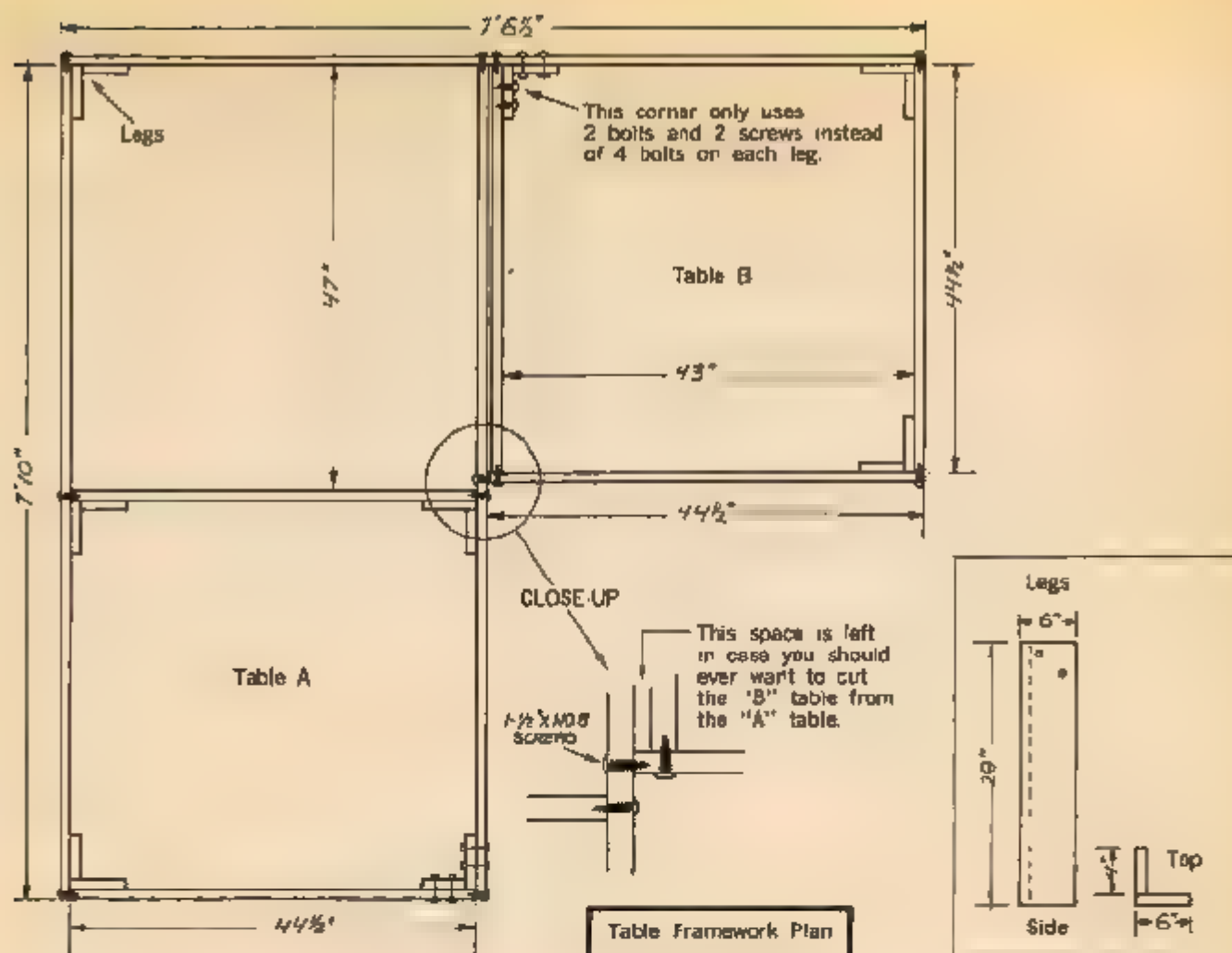
Our table is also going to provide a good base for our track. It is solid and very economical to construct. The entire

cost of the "L" shaped table, with screws, bolts, etc., was \$6.22, not counting the 1/4" plywood sheeting. The table framework is covered by two pieces of this material - one piece being 3 x 4' and the other 4 x 4'. The cost for these two items came to \$4.70, making a grand total of \$0.92.

Call the lumber yard and have them cut the lumber to the exact dimensions shown in the accompanying bill of materials. Most lumber yards do this for you, and it will save you an immense amount of time, and each piece will be nice and square.

Leg construction is shown in this closeup.





Lay the wood on the floor, and just get it arranged so you know where you are at. Don't forget, as you look down at it, the table is laying **UPSIDE DOWN** (Photo #1) This will enable you to bolt the legs in place after the framework is completed, and you can just turn the table over. Should your ceiling be too low, you must construct the table in the normal position. It involves more work, as the legs must be mounted under the frame while several people lift the framework off the floor. If at all possible, build the table upside down and turn it over after you are through.

Bore holes that are slightly smaller than the wood screws you are using, as pilot holes. It will enable you to insert the screws much more easily. Bore $3/16$ " diameter holes through the leg and outer frame of the table, **WHILE THE LEG IS HELD IN POSITION**, and run the $3/16$ " x 2" stove bolts through both pieces and lock them in place with a nut. Use a washer on the outer side of the frame, and also on the leg side. (Photo #2)

Turn the table over on its legs. (Photo

#3). Tighten all nuts and screws. Lay the $1/4$ " plywood sheeting in place and tack it down with small nails. Do not nail the sheeting down tight. Use $5/8$ " long, No. 5 flathead screws, placed about a foot apart, and countersunk into the plywood top, to secure the sheeting to the framework. Remove the nails that you used to tack the plywood in place. Make sure the sheeting is solid and buckle-free over the entire table top.

We now have a good solid, "L" shaped table to start to build our super-circuit on. You can place some cotton material around the bare framework to make the table look more "finished" and also to give it a more solid appearance. (Photo #4)

Next month we'll look over a couple of designs, and go ahead and lay some track.

END OF PART ONE

BILL OF MATERIALS — #2 Wood

- 1 each, 1 x 4, 7'6 1/2" long (For one outer frame rail)
- 2 each, 1 x 4, 7'10" long (For two outer frame rails)
- 5 each, 1 x 4, 44 1/2" long (Crosspieces)
- 8 each, 1 x 4, 29" long (For shortest side of the "L" shaped legs)
- 8 each, 1 x 5, 29" long (For longest side of the "L" shaped legs)
- 24 each 1 1/2" x No. 8 flathead wood screws
- 30 each 2" x 3/16" stovebolts with nuts and two flat washers for each bolt
- 1 sheet of 1/4" plywood, 8 x 4'
- 1 sheet of 1/4" plywood, 4 x 4'
- Several boxes of 3/8" length, No. 5 flathead wood screws

An Atlas controller with a phone jack mounted to the transistor and heat sink was used in simple modification.

You Don't
Have To Be An
ELECTRONICS
GENIUS
To Build A...

TRANSISTORIZED HAND CONTROLLER

BY DICK DOBSON

DRIVE AROUND A TRACK for about half an hour continuously, especially with some of the later motors wound to lower voltages, and you'll end up with a hunk of plastic and a ball of burnt wire in your hand. However with an evening's work and about \$3.00, you can hook up your Atlas controller to stand hours of driving and never even get warm.

Epoxy a 5/16" dowel in to the Milwaukee 1000 ohm resistor, and shim it up with tape till it fits tightly into the slot for the original resistor. With a small wire buffer or sandpaper, clean a 1/4" strip of the insulation off of one side of the resistor, so that the windings just show thro. This is where the wiper will rub. Measure 5/8" from the metal band on one end and place a new band of copper or brass, clean the insulation from the wire beneath it for a good contact. You will now have about 700 ohms resistance.

Cut a strip of .029 brass to the exact dimensions of the wiper plate in the hand controller. Sandwich a piece of thin gauze between the two plates and epoxy the two together. After this has hardened well, make the cuts shown in the illustration with a razor saw. Drill holes for the various wires and solder them to their proper segments. Clamp the plate in a vise while soldering to keep the heat from loosening the epoxy.

The wiper must go on to the segment marked E, 1/32 inch travel after the wiper touches C. This will give you a straight thru wide open, letting your transistor cool a bit on the straights.

The brake contacts are made from brass or copper shim stock. A screw in the slide button closes the contacts about 1/16" before the slide goes to the upper



NOTE THE SCREW THROUGH THE SLIDE BUTTON



RESISTOR AND SLIDE PLATE AFTER CHANGE

stop. This will just take some fooling around with.

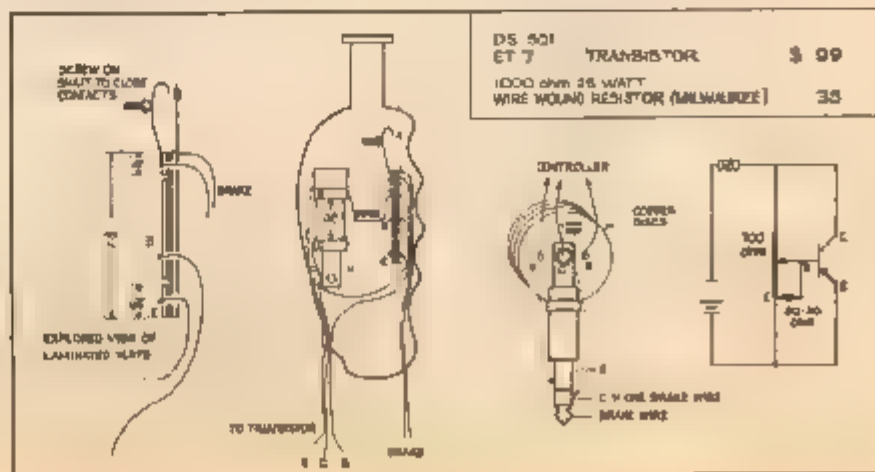
For the heat sink, cut at least five 2" and four 1" discs from .030 copper stock. Drill a 3/16" center hole and two holes for the transistor leads and stack them on to the transistor alternating the large and small plates. If the transistor still stays too hot, add some more discs. They will normally run quite warm and are alright as long as they are not too hot to touch.

Wire up everything except the brakes for the first try. If the car runs wide

open, the C & E leads need switching. Only after your wiring is working right, hook up the brake leads, if your track is wired for them. Even then, a one amp automotive fuse should be installed in the brake lead for safety.

The C & E lead may have to be switched for different tracks. Do the switching between the transistor and the track lines.

If the slow speed on your car is too fast for your cornering speeds, then a 50 to 30 ohm resistor will have to be hooked into the circuit between B & E, one half watt will do.



Build a **TRICK TRACK**

**Try This Loop the
Loop for More
Speed and Action!**



FIGURE 8 COURSE

By George Sinos

While most of you are interested in realistic scale layouts and road courses, some of you might like something a bit more bizarre and out-of-the-ordinary. The track layout described here is sure to please the lovers of the unusual. It is quite easy to build and makes a project ideal as a showpiece, attention getter at hobby shows or for just plain hair-raising action.

The basic layout is made on a 4'x8' piece of 3/8-inch plywood or particle board. The track is routed into it in the conventional manner. Some sections have to be cut out to make it possible to

raise the corners and bank them for added speed.

Two approaches are illustrated here. One, a figure-8 is just a little more difficult to build than the other but yields a more spectacular layout. The oval track is easier to build, however it will also give you many hours of excitement.

Loop the loop driving is based on the principle that if the car is driven fast enough into the loop, it will be acted on by a large enough centrifugal force (at the top of the loop) to overcome the force of gravity. Thus, the car will not fall off.

Notice that the figure-8 course has corners of increasing radii to allow for

the fastest possible speed coming out of the corner before going into the loop. The "deceleration" turn also has a decreasing radius to permit your car to slow down safely without de-slotting. In addition, the corners are banked.

For trick driving such as this, it is not necessary to rout more than one slot. After all, this is a stunt circuit and, if two cars are to be raced, one can always convert to a diode type circuit (previously described in MCS) which allows two cars to be raced in the same slot but still under separate control. If you so desire however, you can certainly make this into a multi-lane circuit.

Construction is fairly simple if you

MODEL CAR SCIENCE



follow these steps and use some common sense.

FIGURE 8 TRACK

Lay out the turns and straights. Cut out a square section from the middle of the 4'x8' board to make room for the loop. Rout the slots into the board and cut out the inside of the turns. Mount the whole thing on a base, e.g. 1/4 inch plywood to provide a secure alignment. Raise the corners by nailing and gluing supports under them shaped so they will form a nice smooth banked turn towards the loop.

To make the loop, take two straight cut 3-inch wide, 1/8" thick, hardboard strips and nail them on 1" x 1" crosswise supports. Make sure that the spacing between the strips is 1/8 inch (this forms

the "slot") and that the supports are slightly angled with the slot. Bend the whole section into a loop and fit it as smoothly as possible into the rectangular cutout of the base.

The cross-over, inside the loop, is made simply by nailing two 3-inch strips of hardboard again, to supports and fastening this between the raised portions of the track. Again, upright supports are used to hold the crossover in its position.

You can now paint the entire track with tire or chalkboard paint to provide good adhesion. Lay the power tape or braided wire and make the necessary power connections with screw terminals. I used Silk-Track for this project as it seems to be the easiest tape to lay and stays on securely (One word of caution; unless the power tape has a good ad-

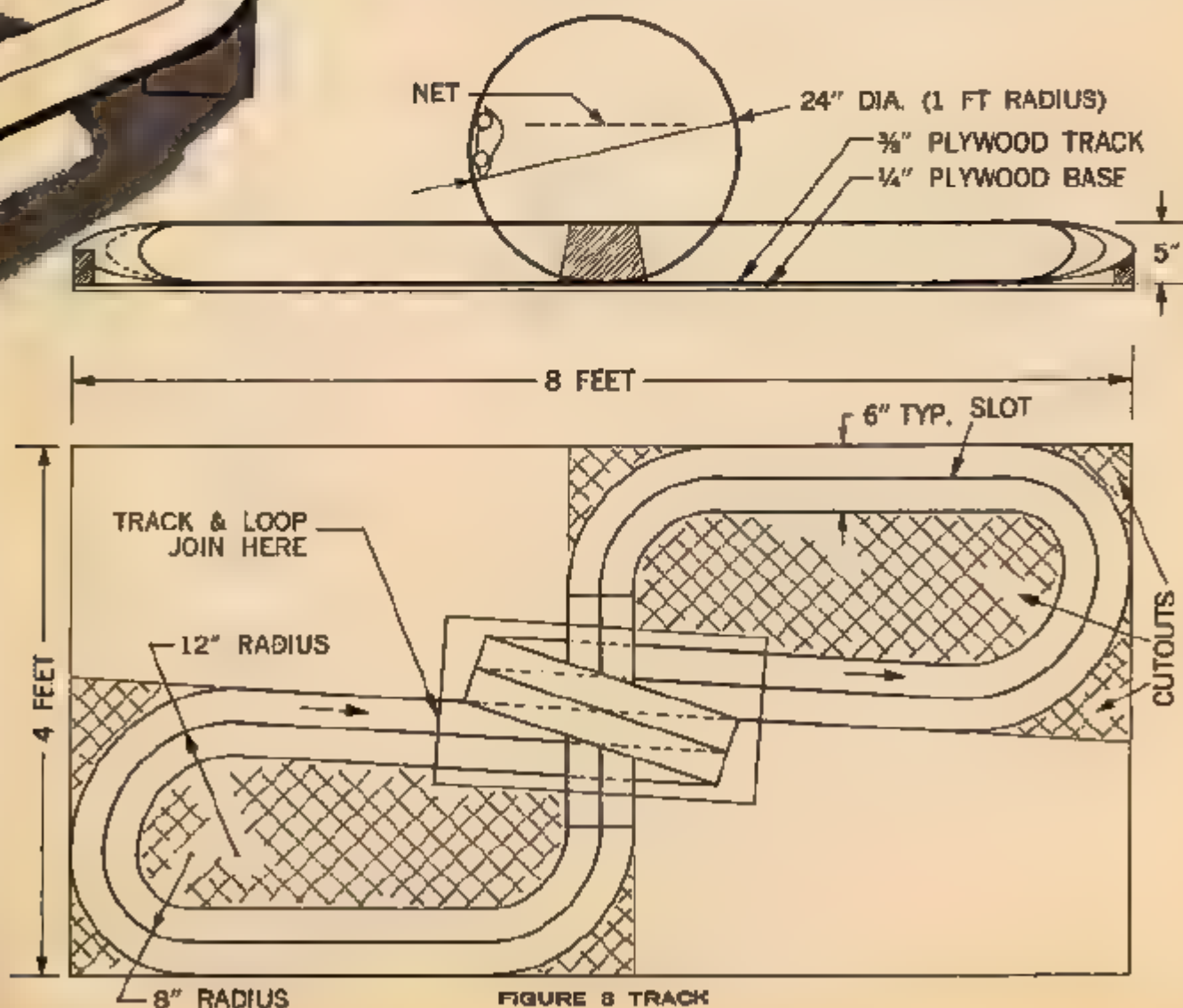
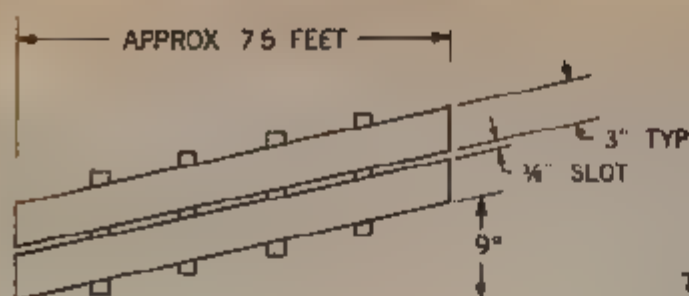


FIGURE 8 TRACK

HOW TO MAKE THE LOOP



NAIL THE TWO STRIPS TO THE SUPPORTS AT THE APPROXIMATE ANGLE SHOWN ABOVE.



THEN, BEND IT INTO LOOP. NOW FIT IT INTO RECTANGULAR CUTOUT OF THE TRACK.



heave on it, it might be necessary to lay it while the loop is in its flat form (i.e. prior to bending it into shape.)

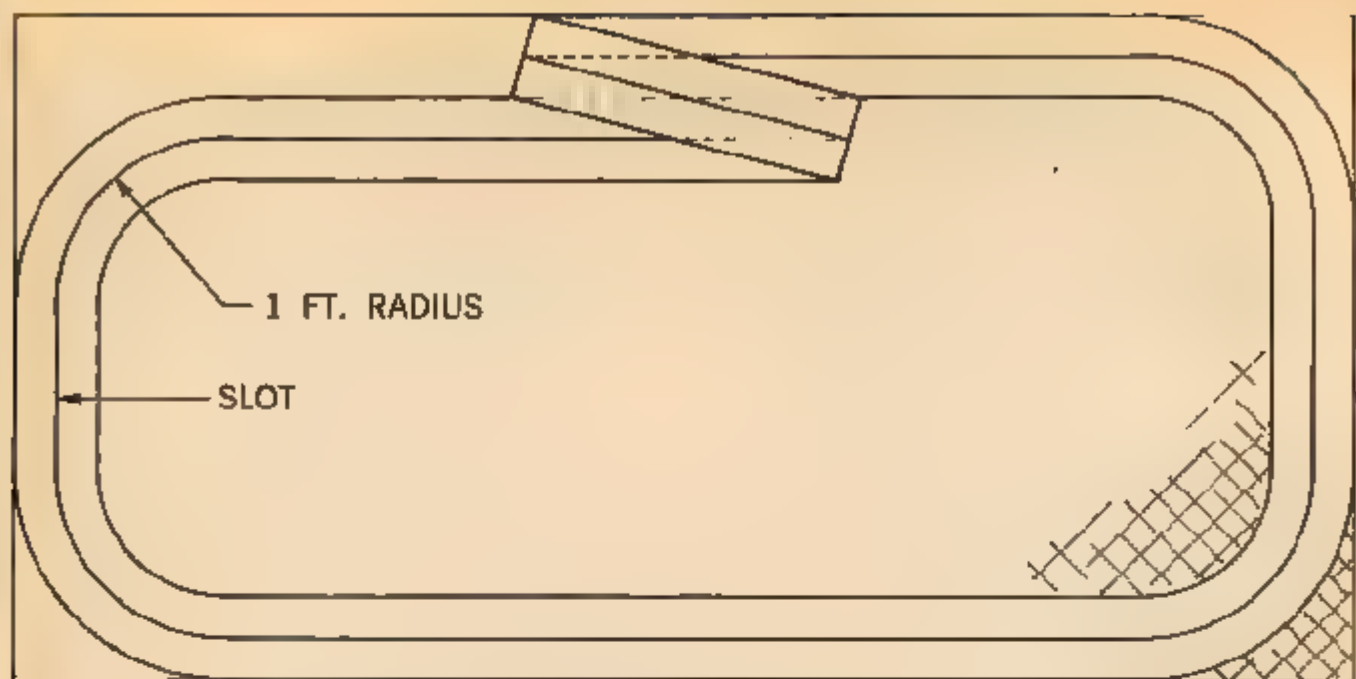
OVAL TRACK DESIGN

The oval track is made in a very similar manner. Again, the infield portions around the corners should be cut out with a safety saw to make it possible to bank the corners. Banking is important since maximum speed is required when approaching the loop and cars coming out of the loop need a safe decelerating zone.

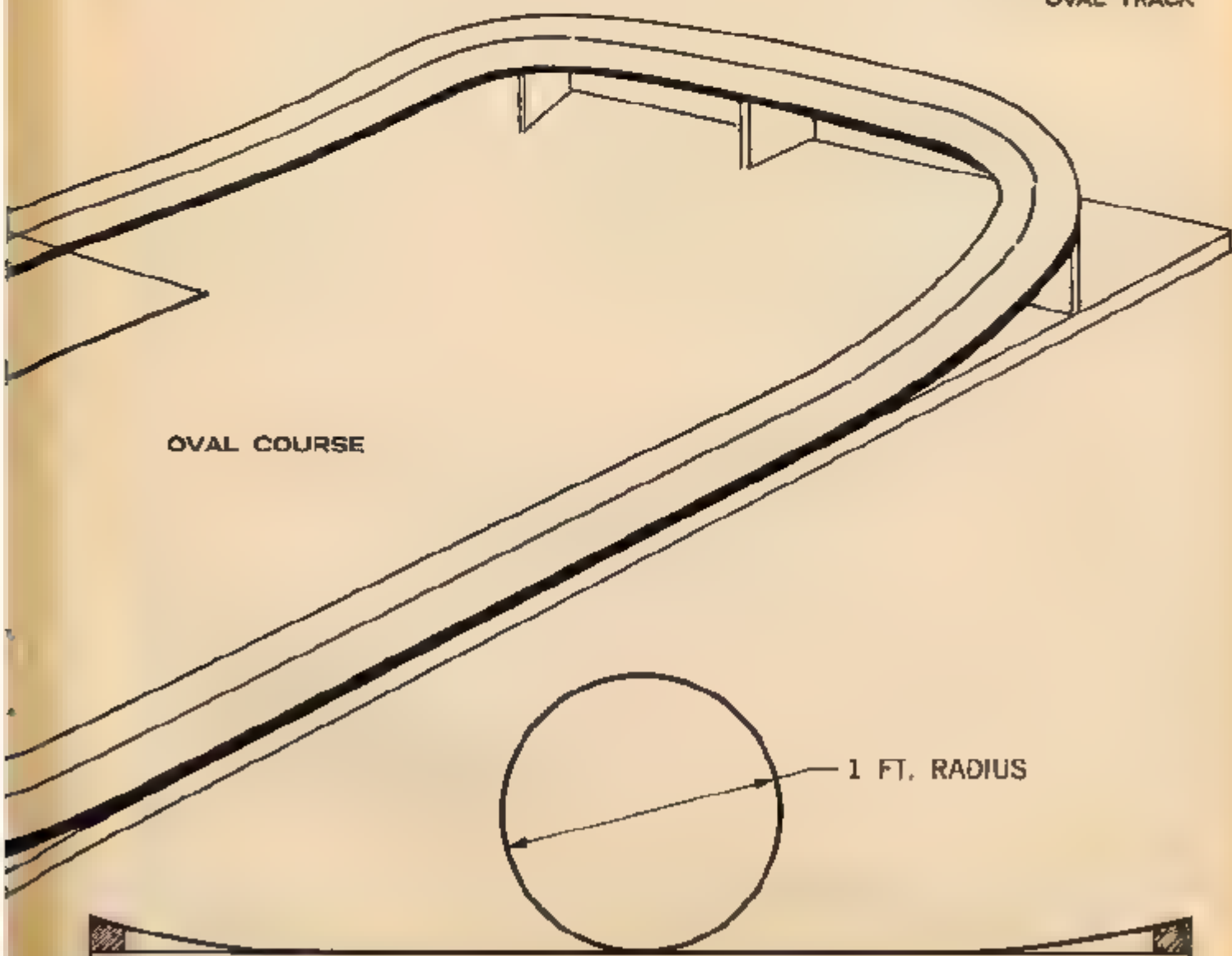
As a guide, it should be pointed out that theoretically speaking, a 32 ounce car requires a minimum speed of 3.66 feet per second, to stay on the top of the loop. Corresponding values for 15 and

2.0 foot radius loops (if you want to make a larger loop) would be 6.93 feet per second and 8 feet per second respectively. These speeds are well within the capabilities of today's slot cars. To safeguard your cars against an accident, it is a good idea to stretch a net or rubber sheet under the loop for them to fall into. It is perfectly all right to drive the cars much faster than the above mentioned speeds, but the loop should be reinforced (braced) on the outside to prevent too much swaying due to the higher centrifugal forces.





OVAL TRACK



OVAL COURSE



Spotlights: TRACK of the MONTH

MOTORAMA RACEWAYS

BY JAMES W. FARRELL

IN KEEPING WITH THE explosive development of the current slot racing craze that has swept the country comes the opening of an operation that could rival any of the best, Motorama Raceways Hobby Shop at 5848 Sepulveda Blvd., Van Nuys, California.

One of the best planned and probably the most challenging course ever designed to confound the slot enthusiast, the facilities here leave little to be desired by anyone, from the rank novice to the hot lap pro.

Motorama is owned by Joel Levine and Sally Novick. Their manager and boss of the store is Jim Mills who guides a pretty fast slot car himself and is an expert in repair and maintenance of all types of slot cars.

Motorama has three different tracks, each designed to provide a different type of challenge. Each track is color coded for easier in-store reference.

Motorama's Blue Track is built for the

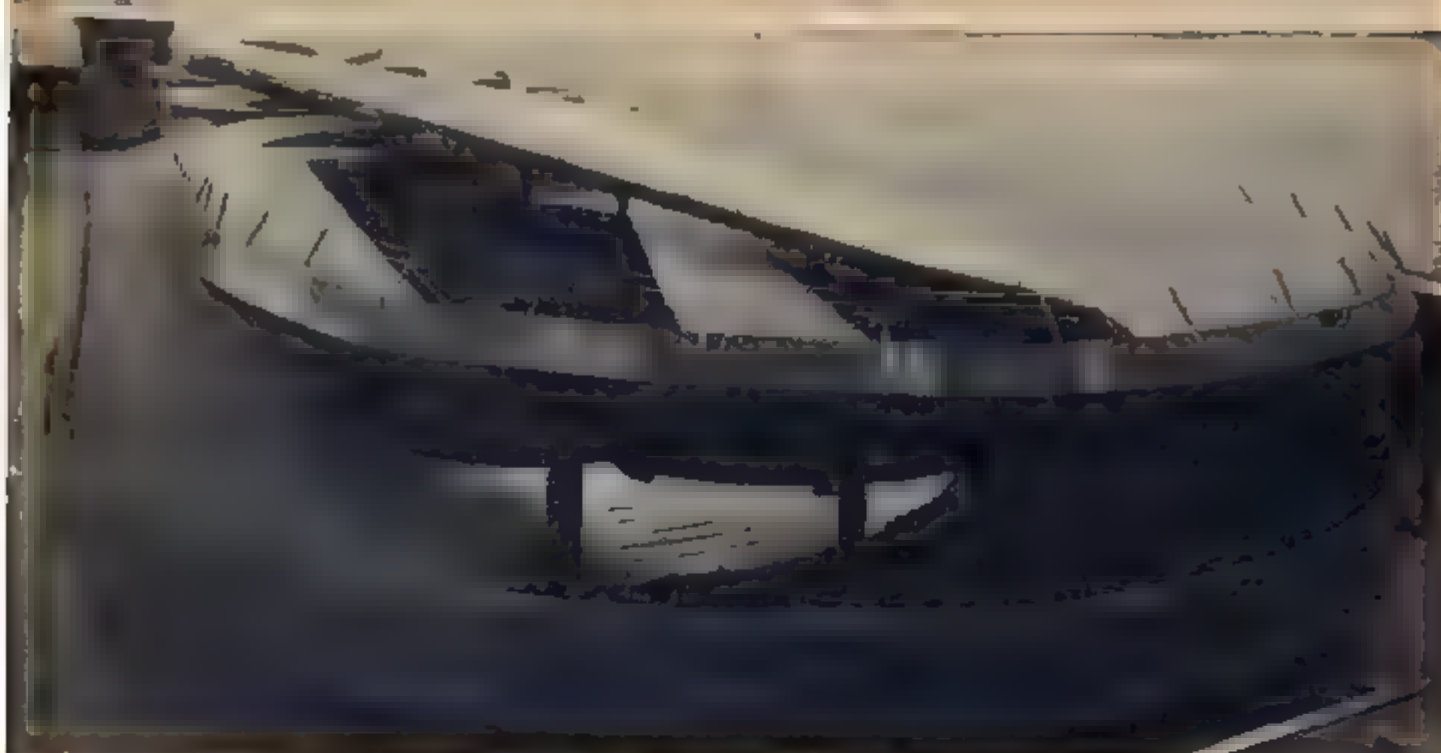
high speed car but will accommodate the beginner as well. Total power available is 11 volts thru brass tape slots. The track has well banked turns, long straightaways and several "ess" turns to confound the upwary driver. The total length of this track is 180 feet with eight lanes to accommodate the fans. This track is recommended for the novice before tackling the other more difficult tracks here.

The Green Track is a slightly more difficult course. Although similar in basic layout, there are more turns with slight banks which make it more difficult to manipulate the cars. The power remains

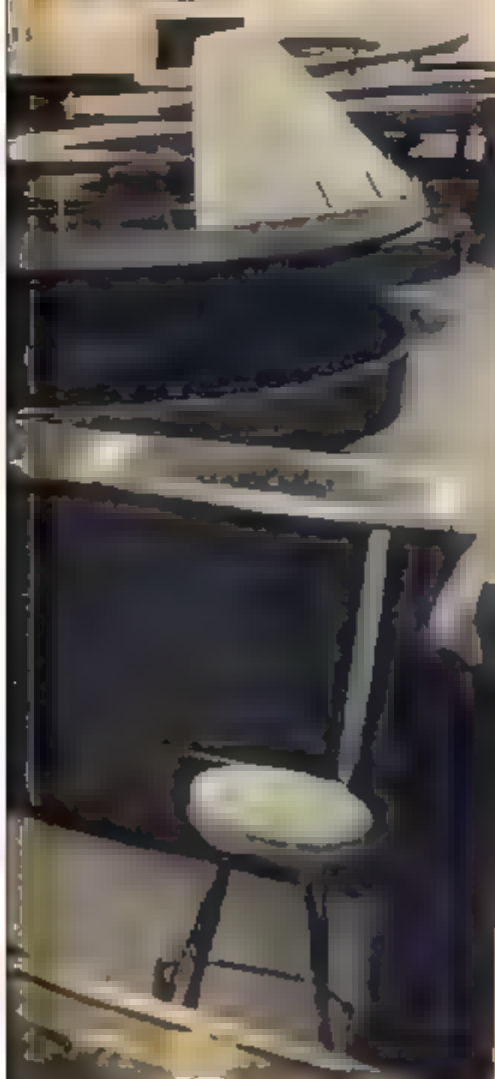
Three road courses plus a drag strip are designed to provide lots of realism and action at the new Motorama Raceways.



Loung
VIEW LIMITED



REFRESHMENT



MOTORAMA'S ORANGE TRACK PIKE'S PEAK IS THE ACID TEST FOR TRUE DRIVING SKILL

the same, 18 volts, but there are only 178 feet of track. This is definitely a course for the high speed driver who can handle banked turns with expert fingers.

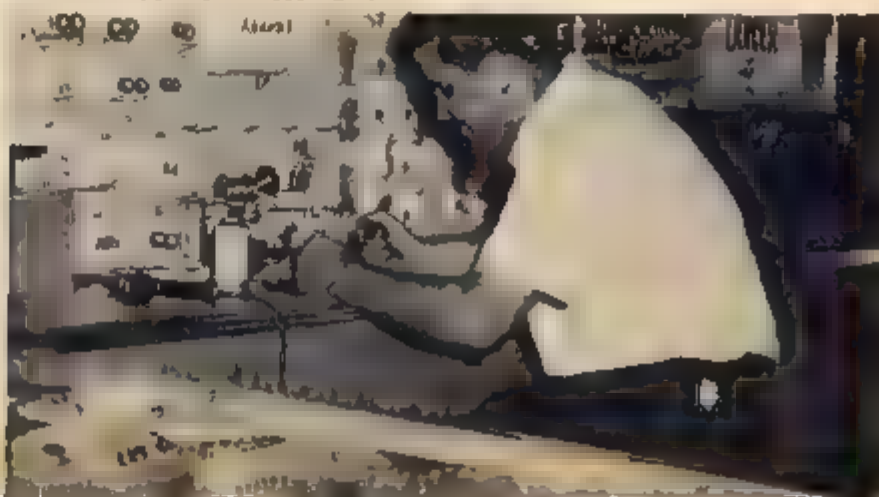
The acid test for the most skilled of drivers is Motorama's Orange Track. This is a track which is 408 feet of extremely long straights going into a steeply banked turn, then into a series of "eas" turns which will unnerv even the best driver. The track rolls and turns into three tiers and there are times when your car is completely hidden from view. It has been rightly named the "Pike's Peak" course by the experts.

Soon to be completed will be another of the many features of this sporty in-

stallation, namely the drag strip. This will have three lanes and will provide from 12 to 36 volts of power. It will have a Formica surface and individual timers that will operate completely independent of the other lanes. The starting system to be used here will be the "Christmas Tree" anticipation variety. The strip will also feature a photo cell timing device that will still operate even though a car goes through sideways.

A very large pit stop, divided into stalls, each with its own vise and stool is available for car repeers. In addition to all this, there is a large refreshment area with anything you could ask for during a long Enduro

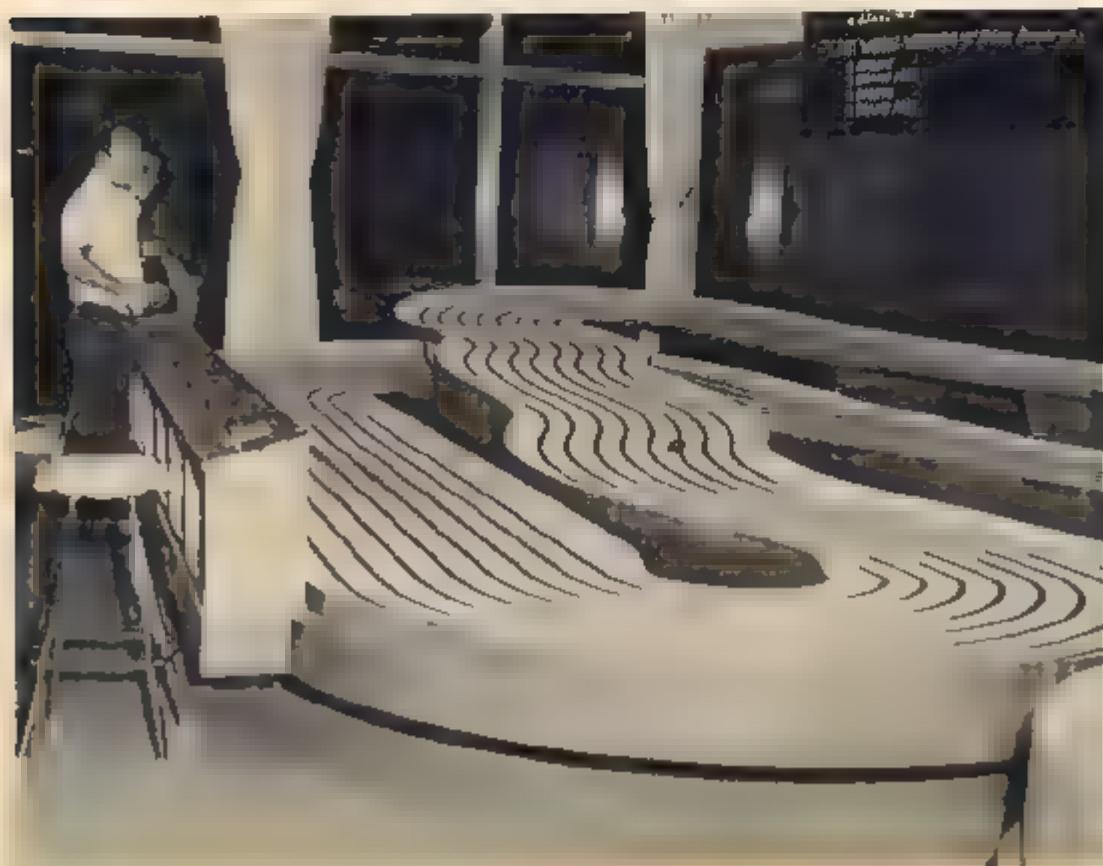
STORE MANAGER JIM MILLER IS QUITE AN EXPERT AT GETTING TOP PERFORMANCE FROM A SLOT CAR





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SEVERAL LESS TURNS HAVE BEEN BUILT INTO MOTORAMA'S 60 FOOT BLUE TRACK



PIT-AREA REPAIRS

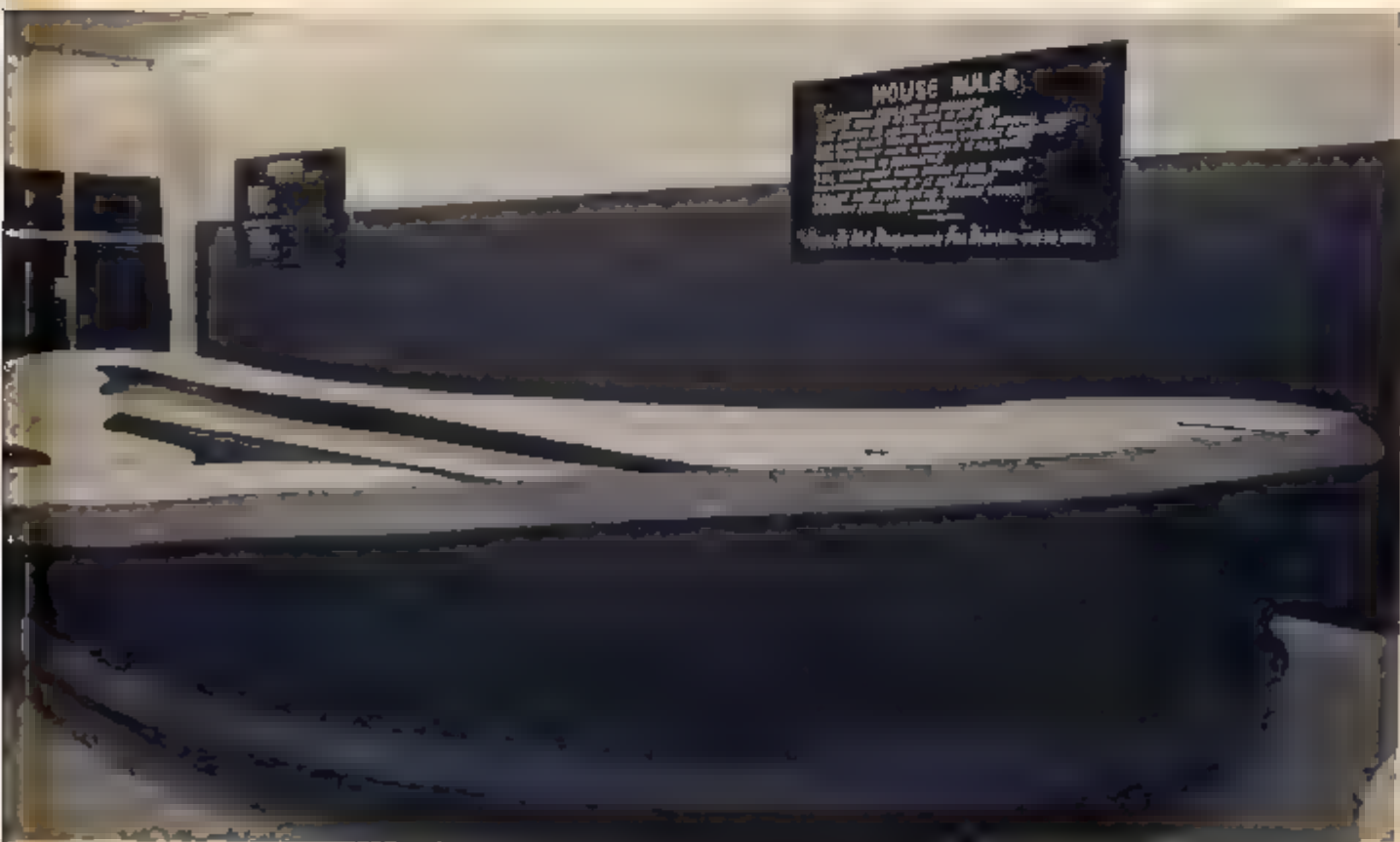


PIT-AREA REPAIRS



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SLOT RACER'S

Work Shop

NEW IDEAS IN RACING MODIFICATIONS

by Raymond E. Hoy

BODY MOUNTING- THE CONTINUING PROBLEM

When clear plastic body shells are used, body mounting is always somewhat of a problem. Here is probably the simplest way to mount a body quickly and professionally.

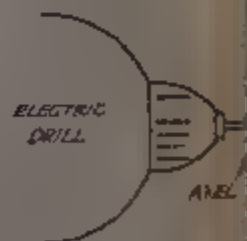
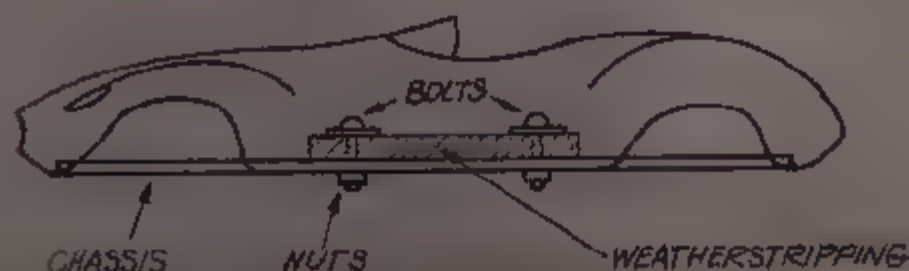
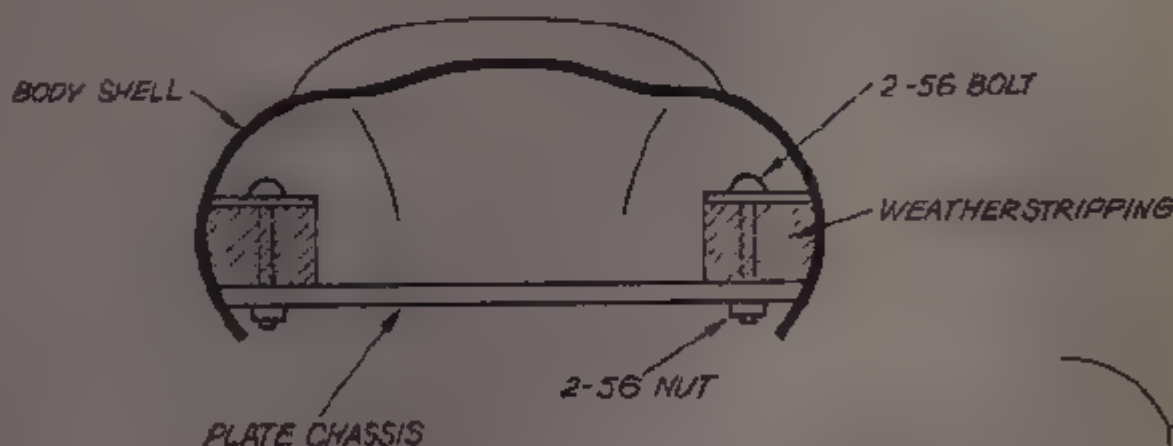
Obtain some rubber weatherstripping, such as is used around storm doors, and cut two pieces about 1" long. Coat one side of each piece with weatherstripping adhesive and glue them along the lower edges of the plastic body shell, one on each side.

Cut two small metal plates, aluminum is fine, about the same width as the piece of weatherstrip, and drill a small hole in it. They will serve as the upper mounting plates.

Use an ice pick or a hand reamer, and tap a small hole through the weatherstripping. Drop a 2-56 bolt down through the plate and the weatherstripping from the top one on each side.

Now on your chassis, (which is usually a plate type, on homemade chassis drill holes which will take the 2-56 bolt that is protruding through the bottom of the weatherstripping. Position the chassis so the bolt's tip through the holes you have just drilled in the plate pan and secure with a lock washer and a 2-56 nut. The finished mount is quiet, solid, and completely vibrationless.

FRONT VIEW



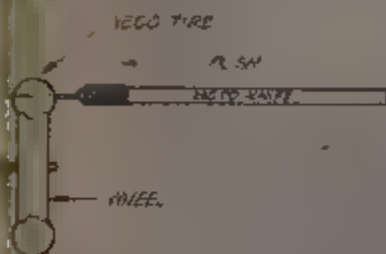
CUTTING DOWN A VECO-TYPE TIRE

by Raymond E. Hoy

Far and away the fastest way to cut down one of the big Veco airplane tires, for use on the rear end of a slot car, is to slice the excess rubber off rather than sand it off as is usually done.

Mount the Veco tire on a wheel and the wheel on an axle. Chuck the axle in an electric drill and lay it on a table or have a friend hold it. Take an X-Acto knife with a fine pointed blade and figure out approximately how much you want to trim off the tire. Don't start cutting at exactly the diameter you want the tire to be because you may still do the final shaping with sandpaper.

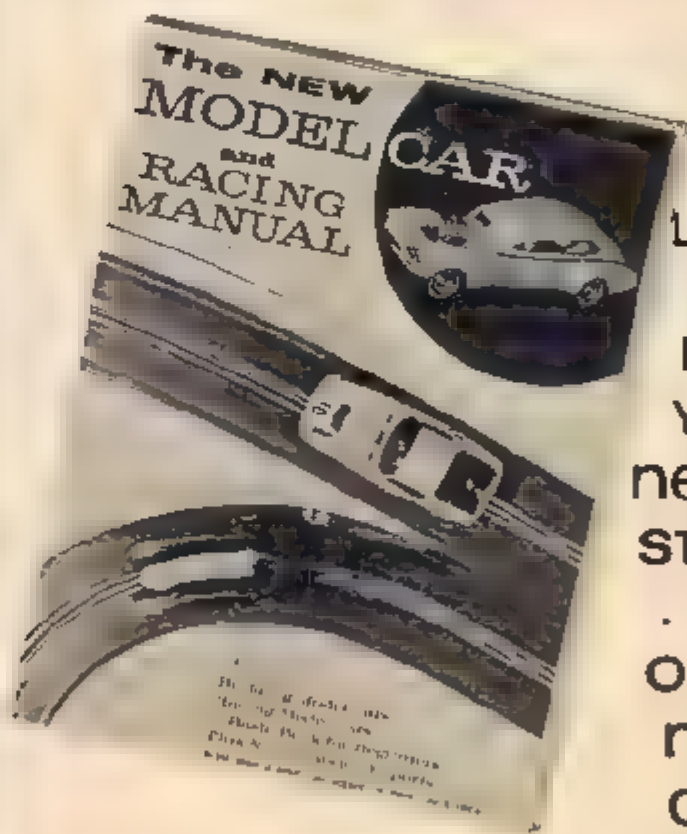
Work the point of the knife into the sidewall of the tire while the tire is rotating in the drill. You should be able to get a push right on through the entire tire, slicing off the outer layer of rubber like you would peel an apple. Do final shaping with a sandpaper block.



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MOTOR MAINTENANCE

All model car racing motors in popular use are built to the same general principle. They consist of a wound armature and commutator on a shaft to rotate a permanent magnetic field with the armature windings being switched by means of its commutator and brushes to attract or repel the armature lobes between the field poles to provide rotary action. The active parts may be listed as follows:

1. Pole magnets or magnet and pole
2. Armature and commutator
3. Brush holder, springs and brushes
4. Shaft and bearings.

Some rules and hints should be observed in handling these motors and should be kept in mind.

1. Never take your motor apart unless you are able to have it remagnetized. The magnetic field strength is weakened by disassembling.

2. Lubricate your motor sparingly at the bearings only. Never permit oil to get on the commutator or brushes.

3. Do not run your motor for extended periods of time at higher than the manufacturer's rated voltage. Yes, you do get more power, but you also stand a good chance of burning the motor out.

4. Few manufacturers recommend the use of electronic or TV contact cleaners on the brushes and commutator. It works great for a few minutes but often when



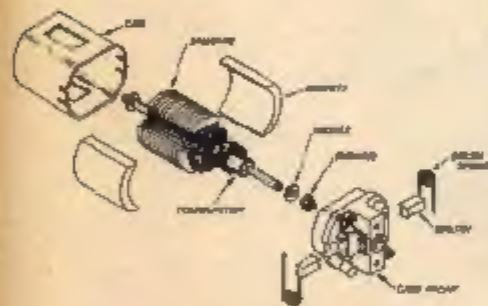
"Getting off the line first means a lot to you doesn't it, Peter?"

the initial jolt of speed is over you will find that your motor is running slower and the commutator is beginning to gum up. This can also lead to burn out.

5. Do not leave small steel screws and nuts or other items close to a running motor. They have a way of being sucked up into the motor by the magnets and can really tear your windings up for a total washout. A good way to protect your motor from tramp bits of steel is to cover the openings in the motor case on the underside of the chassis with a small piece of plastic window screening. Do not use metal mesh.

6. In removing a gear from the motor shaft, find some way to support the gear and drive the shaft out with a small punch. Don't try to pry it off against the case, you'll bend the shaft.

7. No mechanism will run well if it is dirty. The commutator should be cleaned with very fine sandpaper, never use emery. Carbon dust, oil and trade dirt can best be removed with cleaning solvent. This should not be done under power because of the danger of fire.



8. If the brushes are removed, try to get them back in the same side that they came from — they will fit better and not require a run-in period. New brushes often have to run-in for best performance.

9. Avoid over heating. If your motor is running hot, check for too high a voltage, tight or mis-aligned gears or bearings or rubber tires. If all these are okay and the power train turns smoothly, it may be in the power supply rectifiers, or a dirty commutator.

10. Be sure that the lead wires are well soldered; that all strands are unbroken at the solder joint; and in cars where the leads are soldered directly to the brush arm, be sure that the wires are loose and free; and that they are not pulling on the brush arm at all.

11. In many cars, the installation in the chassis or body can cause poor motor performance or damage. Be sure that the motor shaft is in line with, and at right angles to, the axle. The motor must be securely mounted and not be able to twist or bounce from torque. Allow space for cooling ventilation. All parts must move freely.



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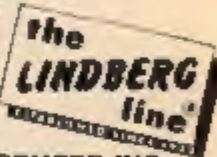
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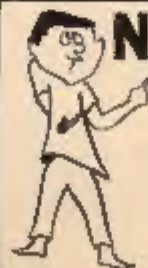
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Vol. 2, No. 1

Van Nuys, California

February, 1965

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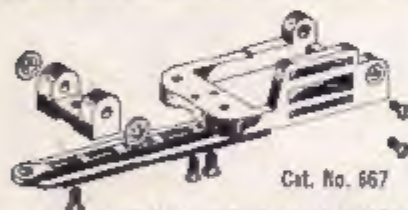
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